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M E M O R A N D U M

TO: John Mitnik, Assistant Executive Director, Executive Office Staff

FROM: SFWMD Staff Environmental Advisory Team

DATE: June 14, 2023

SUBJECT: Weekly Environmental Conditions for Systems Operations

Summary

Weather Conditions and Forecast

The area average rainfall across the SFWMD will gradually decrease over the next few days while a subtropical ridge reestablishes itself over Florida, resulting in a drier, more stable atmosphere. However, there's still enough moisture present to trigger scattered showers and thunderstorms along the lower east Wednesday, specifically near the sea breeze boundary. By Thursday and Friday, a substantial reduction in rainfall is expected over the south due to the return of the subtropical ridge. Passing upper-level disturbances north of the SFWMD might generate thunderstorm activity over the Kissimmee Valley. Later in the week, the subtropical ridge is predicted to erode quickly triggering extensive showers and thunderstorms across the SFWMD from Saturday into Monday. However, the confidence in these long-range forecasts is lower than usual, given the varying solutions provided by different computer models. Looking at the week ahead, below to near average SFWMD total rainfall is projected for the 7-day period ending next Tuesday morning.

Kissimmee

Releases remained at zero from East Lake Toho and Lake Toho after they both reached their respective low pools on June 1. Weekly average discharges on June 11, 2023 at S-65 and S-65A were 94 cfs and 330 cfs, respectively. Mean weekly water depth on the Kissimmee River floodplain of 0.15 ft was essentially unchanged from the previous week. The weekly average concentration of dissolved oxygen in the Kissimmee River decreased from 7.3 mg/L last week to 5.2 mg/L for the week ending June 11, 2023, above both the potentially lethal level and the physiologically stressful range for largemouth bass and other sensitive species.

Lake Okeechobee

Lake Okeechobee stage was 14.04 feet NGVD on June 11, 2023, which is 0.06 feet higher than the previous week and 0.06 feet higher than a month ago. Average daily inflows (excluding rainfall) increased from the previous week, going from 1,239 cfs to 1,772 cfs. Average daily outflows (excluding evapotranspiration) decreased from the previous week, going from 511 cfs to 145 cfs. The most recent satellite image (June 11,

2023) from NOAA's Harmful Algal Bloom Monitoring System showed the highest bloom potential in the southern and central regions of the Lake, and medium to high bloom potential in the western regions. Overall, bloom potential increased compared to the previous week. Routine phytoplankton monitoring on June 6 - 8, revealed that total microcystins concentrations were above detection limit at 63% of the sites. The highest concentration was recorded at PALMOUT2 (16 µg/L), and concentrations at three other sites (POLESOUT2, PELBAY3, LZ30) exceeded the EPA recreational standard of 8 µg/L. Additionally, 83% of the sites had communities dominated by *Microcystis aeruginosa* and the remaining sites had mixed communities. No actively foraging wading birds were seen on the Lake during the June 8th survey.

Estuaries

Total inflow to the St. Lucie Estuary averaged 902 cfs over the past week with no flow coming from Lake Okeechobee. Mean salinities decreased at HR1 and increased slightly at US1 and A1A sites over the past week. Salinity in the middle estuary was in the optimal range (10-25) for adult eastern oysters.

Total inflow to the Caloosahatchee Estuary averaged 3,898 cfs over the past week with 155 cfs coming from Lake Okeechobee. Mean salinities decreased at all sites within the estuary over the past week. Salinities were in the optimal range (0-10) for tape grass in the upper estuary. Salinities were in the optimal range for adult eastern oysters at Shell Point (10-25), in the lower stressed range at Cape Coral (5-10), and in the upper stressed range at Sanibel (>25).

Stormwater Treatment Areas

For the week ending Sunday, June 11, 2023, no Lake Okeechobee water was delivered to the FEBs/STAs. The total amount of Lake releases sent to the FEBs/STAs in WY2024 (since May 1, 2023) is approximately 2,000 ac-feet. The total amount of inflows to the STAs in WY2024 is approximately 120,000 ac-feet. Most STA cells are at or above target stage. STA-1E Western Flow-way is offline for post-construction vegetation grow in, STA-1E Central Flow-way is offline for a Refurbishments project survey, STA-3/4 Eastern Flow-way is offline for vegetation rehabilitation/drawdown, and STA-2 Flow-way 2 is offline for post-construction vegetation grow in. Operational restrictions are in effect in STA-1E Eastern Flow-way, STA-1W Eastern, Western, and Northern Flow-ways, and STA-2 Flow-ways 3 and 4 for vegetation management activities. STA-1E Central Flow-way, STA-1W Northern Flow-way, Cell 7 and Cell 8, and STA-2 Flow-way 3 contain nests of Migratory Bird Treaty Act protected species. This week, if 2008 LORS recommends Lake releases to the WCAs and conditions allow, releases will be sent to STA-2.

Everglades

Stage across the EPA rose last week as rainfall increased in every basin except WCA-3A, but a slower rate of change in every basin, except WCA-2A, compared to the previous week meant most regions were categorized as having a "fair" or "good" rate. White Ibis continue nesting in eastern WCA-1, and the Cabbage Bay colony in ENP remains active. Total nesting effort was relatively low in the Everglades this year, with a preliminary estimate of 26,000 nesting, about 16,000 below the 10-year mean. Depths increased again at most Taylor Slough sites last week and remain well above historical average.

Average salinity fell again last week in Florida Bay and continues to trend towards a fresher than average condition for this time of year.

Biscayne Bay

Total inflow to Biscayne Bay averaged 1,247 cfs and the previous 30-day mean inflow averaged 951 cfs. The seven-day mean salinity was 26.1 at BBCW8 and 25.1 at BBCW10, both within the ideal salinity range for estuarine organisms in this region (salinity less than 35). Data provided by Biscayne National Park.

Supporting Information

Kissimmee Basin

Upper Kissimmee

On June 11, 2023, mean daily lake stages were 55.0 feet NGVD (1.5 feet below schedule) in East Lake Toho, 52.2 feet NGVD (1.3 feet below schedule) in Lake Toho, and 50.4 feet NGVD (0.6 feet below schedule) in Lakes Kissimmee-Cypress-Hatchineha (KCH) (**Table KB-1, Figures KB-1-3**).

Lower Kissimmee

For the week ending June 11, 2023, mean weekly discharge was 94 cfs at S-65 and 330 cfs at S-65A. Mean weekly discharge from the Kissimmee River was 520 cfs at S-65D and 510 cfs at S-65E (**Table KB-2**). Mean weekly headwater stages were 46.6 feet NGVD at S-65A and 27.8 feet NGVD at S-65D on June 11, 2023. Mean weekly river channel stage of 33.7 ft NGVD on June 11, 2023 increased by about a half foot from the previous week (**Figure KB-4**). Mean weekly water depth on the Kissimmee River floodplain of 0.15 ft for the week ending June 11, 2023 was essentially unchanged from the previous week (**Table KB-2, Figure KB-5**). The weekly average concentration of dissolved oxygen in the Kissimmee River decreased from 7.3 mg/L the previous week to 5.2 mg/L for the week ending June 11, 2023 (**Table KB-2, Figure KB-6**).

Water Management Recommendations

Follow the IS-14-50 discharge plan for S-65/S-65A, including limiting lake stage ascension rates to 0.25 ft/week to the extent possible in East Lake Toho, Lake Toho and KCH.

Table KB-1. Average discharge for the preceding seven days, Sunday’s average daily stage and Sunday’s average daily departure from KCOL flood regulation lines or temporary schedules. All data are provisional.

| Water Body | Structure | Stage Monitoring Site | Weekly (7-Day) Average Discharge (cfs) | Sunday Lake Stage (feet NGVD) ^a | Schedule Type ^b | Sunday Schedule Stage (feet NGVD) | Sunday Departure from Regulation (feet) | |
|---|-----------|-----------------------|--|--|----------------------------|-----------------------------------|---|--------|
| | | | | | | | 6/11/23 | 6/4/23 |
| Lakes Hart and Mary Jane | S-62 | LKMJ | 0 | 59.8 | R | 60.0 | -0.2 | -0.4 |
| Lakes Myrtle, Preston and Joel | S-57 | S-57 | 0 | 60.0 | R | 61.0 | -1.0 | -1.0 |
| Alligator Chain | S-60 | ALLI | 0 | 62.1 | R | 63.2 | -1.1 | -1.1 |
| Lake Gentry | S-63 | LKGT | 0 | 59.7 | R | 61.0 | -1.3 | -1.4 |
| East Lake Toho | S-59 | TOHOE | 0 | 55.0 | R | 56.5 | -1.5 | -1.5 |
| Lake Toho | S-61 | TOHOW S-61 | 0 | 52.2 | R | 53.5 | -1.3 | -1.5 |
| Lakes Kissimmee, Cypress and Hatchineha | S-65 | KUB011 LKIS5B | 94 | 50.4 | R | 51.0 | -0.6 | -0.6 |

a. Names of in-lake monitoring sites and structures used to determine lake stage. If more than one site is listed, an average is reported.

b. A: projected recession line; R: USACE regulation schedule; S: temporary recession target line; T: temporary schedule; NA: not applicable or not available.

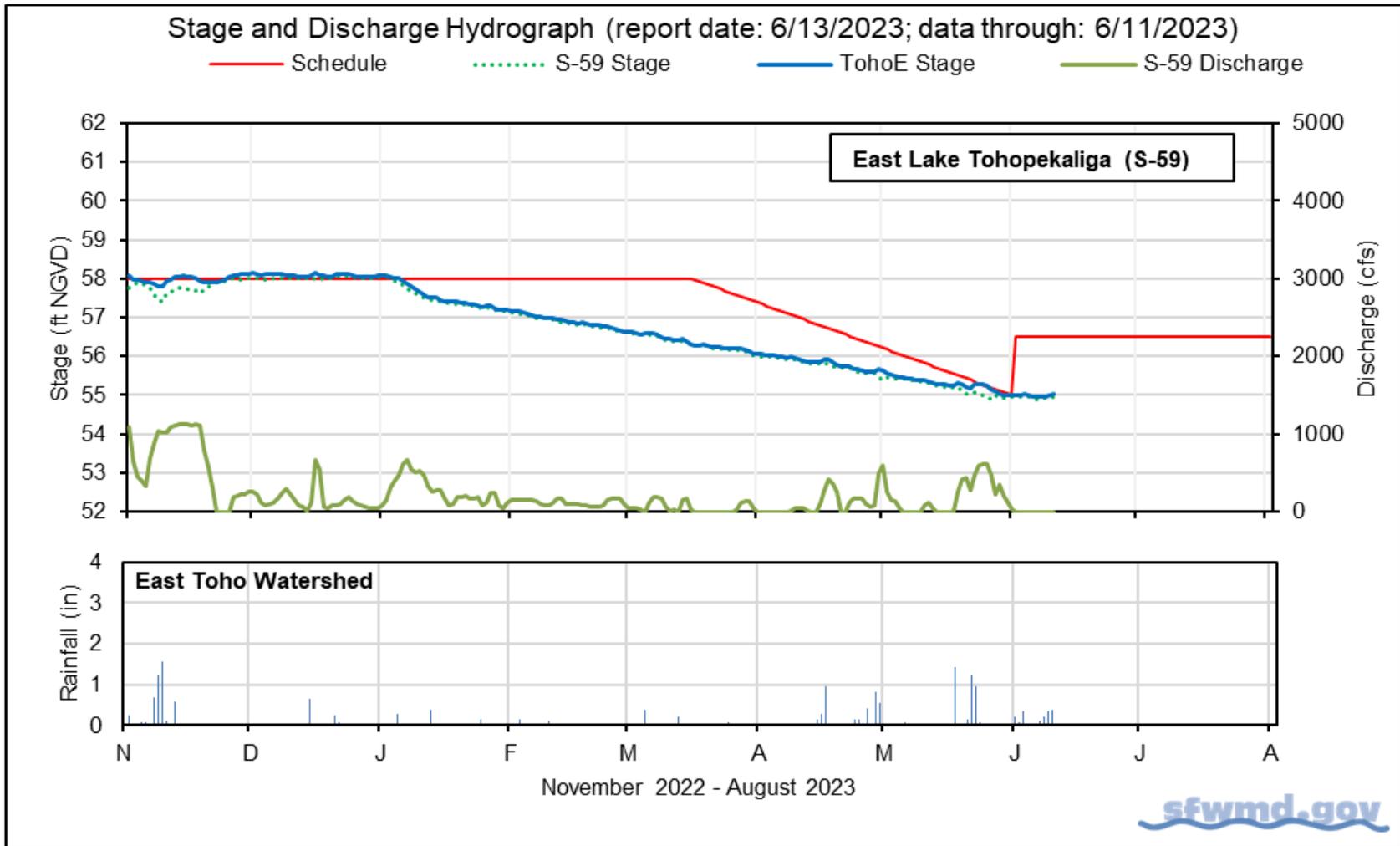


Figure KB-1. East Lake Toho regulation schedule, stage, discharge and rainfall.

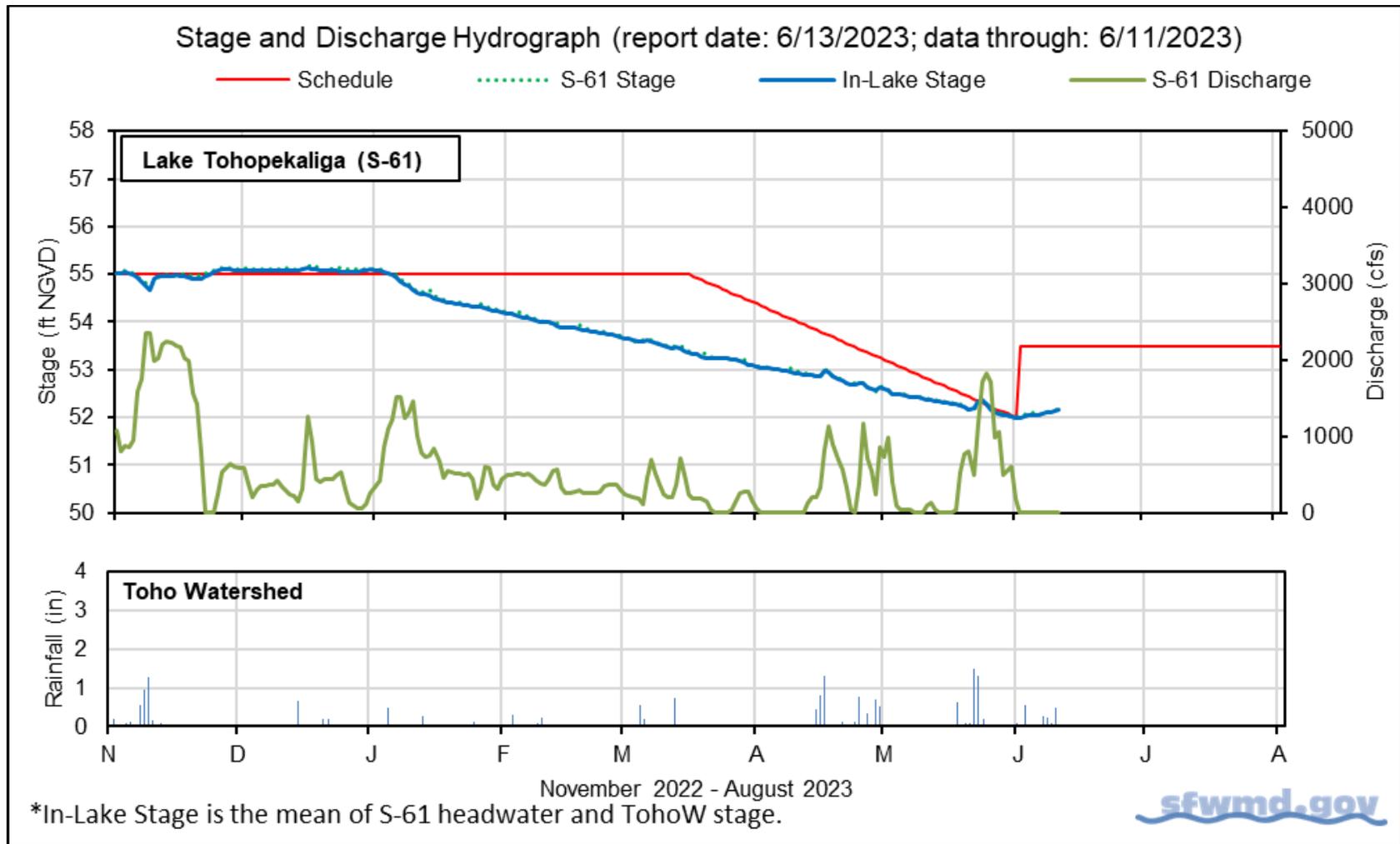


Figure KB-2. Lake Toho regulation schedule, stage, discharge and rainfall.

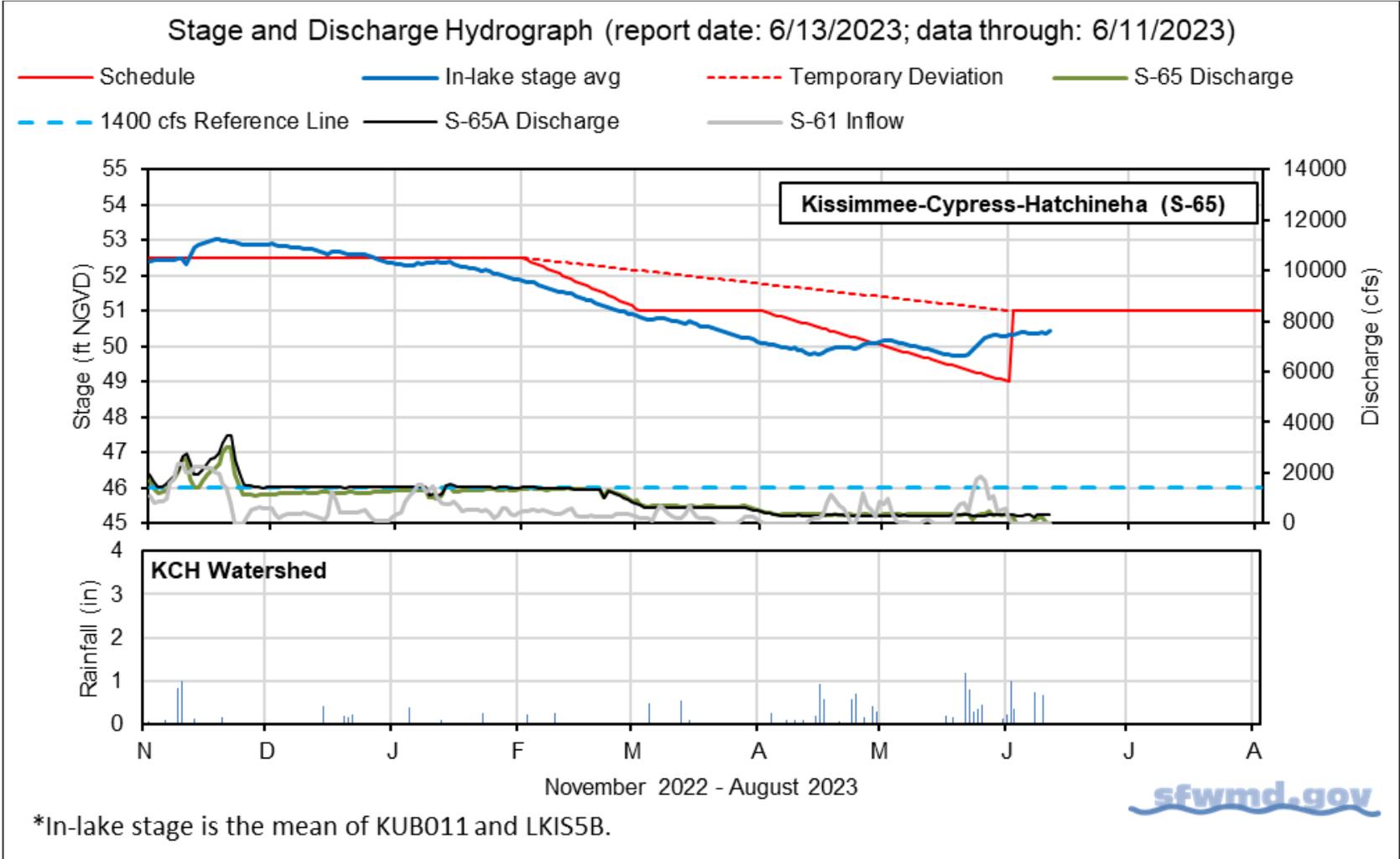


Figure KB-3. Lakes Kissimmee, Cypress and Hatchineha regulation schedule, stage, discharge and rainfall.

Table KB-2. One- and seven-day average discharge and stage at Lower Kissimmee basin structures, river channel dissolved oxygen concentrations and water depths in the Phase I area floodplain. All data are provisional.

| Metric | Location | Sunday Daily Average | Weekly Average for Previous Seven Day Periods | | | |
|---------------------------------------|-------------------------------|----------------------|---|--------|---------|---------|
| | | 6/11/23 | 6/11/23 | 6/4/23 | 5/28/23 | 5/21/23 |
| Discharge | S-65 | 0 | 94 | 240 | 330 | 350 |
| Discharge | S-65A ^a | 350 | 330 | 310 | 310 | 310 |
| Headwater Stage (feet NGVD) | S-65A | 46.8 | 46.6 | 46.4 | 46.1 | 46.4 |
| Discharge | S-65D ^b | 520 | 520 | 360 | 430 | 300 |
| Headwater Stage (feet NGVD) | S-65D ^c | 27.8 | 27.8 | 28.1 | 28.2 | 28.3 |
| Discharge (cfs) | S-65E ^d | 500 | 510 | 380 | 430 | 260 |
| Discharge (cfs) | S-67 | 0 | 0 | 0 | 0 | 0 |
| Dissolved Oxygen (mg/L) ^e | Phase I, II/III river channel | 4.7 | 5.2 | 7.3 | 7.1 | 7.4 |
| River channel mean stage ^f | Phase I river channel | 33.6 | 33.7 | 33.1 | 33.0 | 32.8 |
| Mean depth (feet) ^g | Phase I floodplain | 0.14 | 0.15 | 0.13 | 0.13 | 0.08 |

a. Combined discharge from main and auxiliary structures.

b. Combined discharge from S-65D, S-65DX1 and S-65DX2.

c. Average stage from S-65D and S-65DX1.

d. Combined discharge from S-65E and S-65EX1.

e. Dissolved oxygen is the average of values from sondes KRBN, PC62, PC33, PD62R and PD42R.

f. Mean of five river channel stations (PC62, KRDR02, KRBN, PC33, PC11) in the Phase I area.

g. One-day spatial average obtained from the South Florida Water Depth Assessment Tool (SFWDAT).

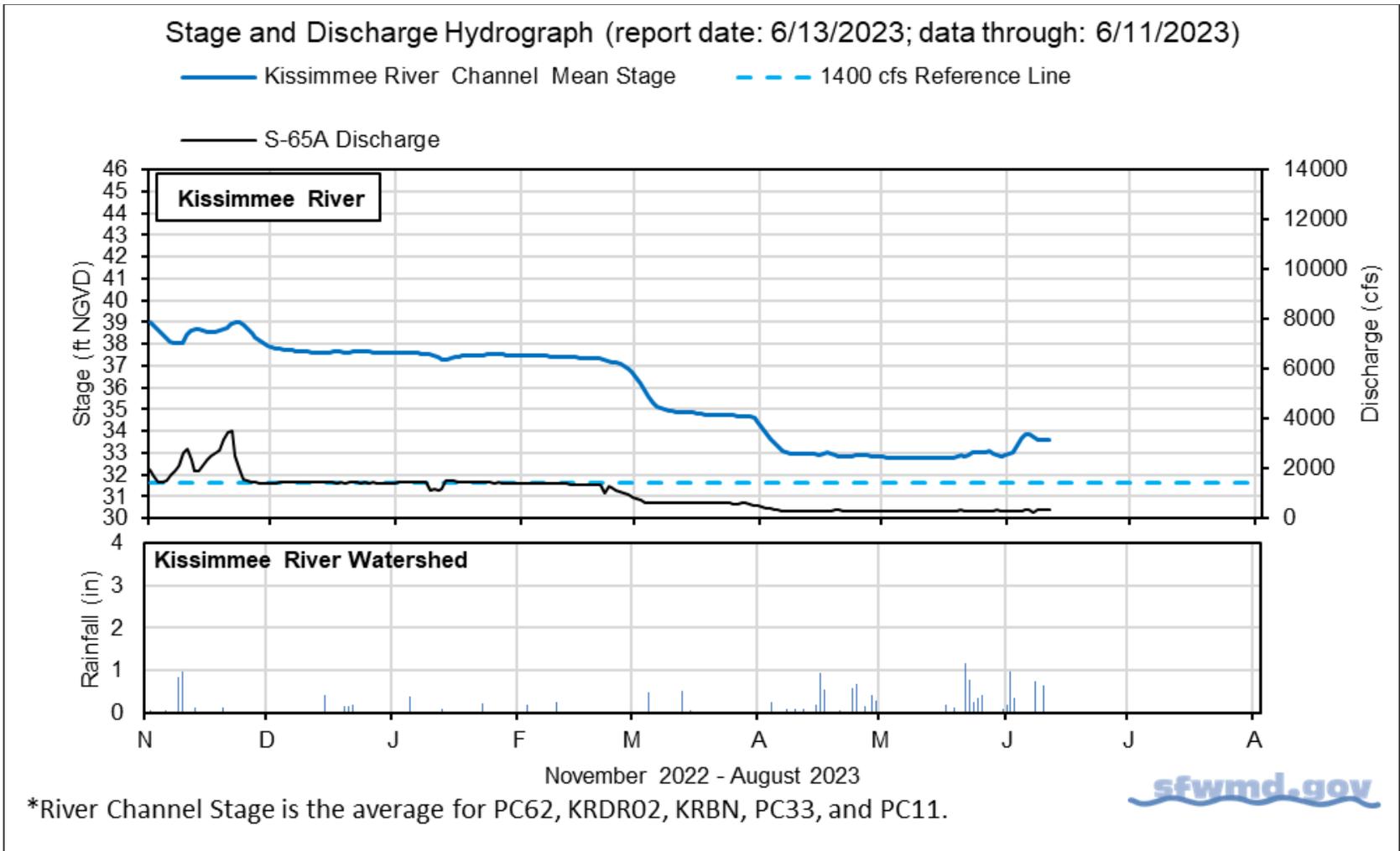


Figure KB-4. Kissimmee River stage, discharge and rainfall.

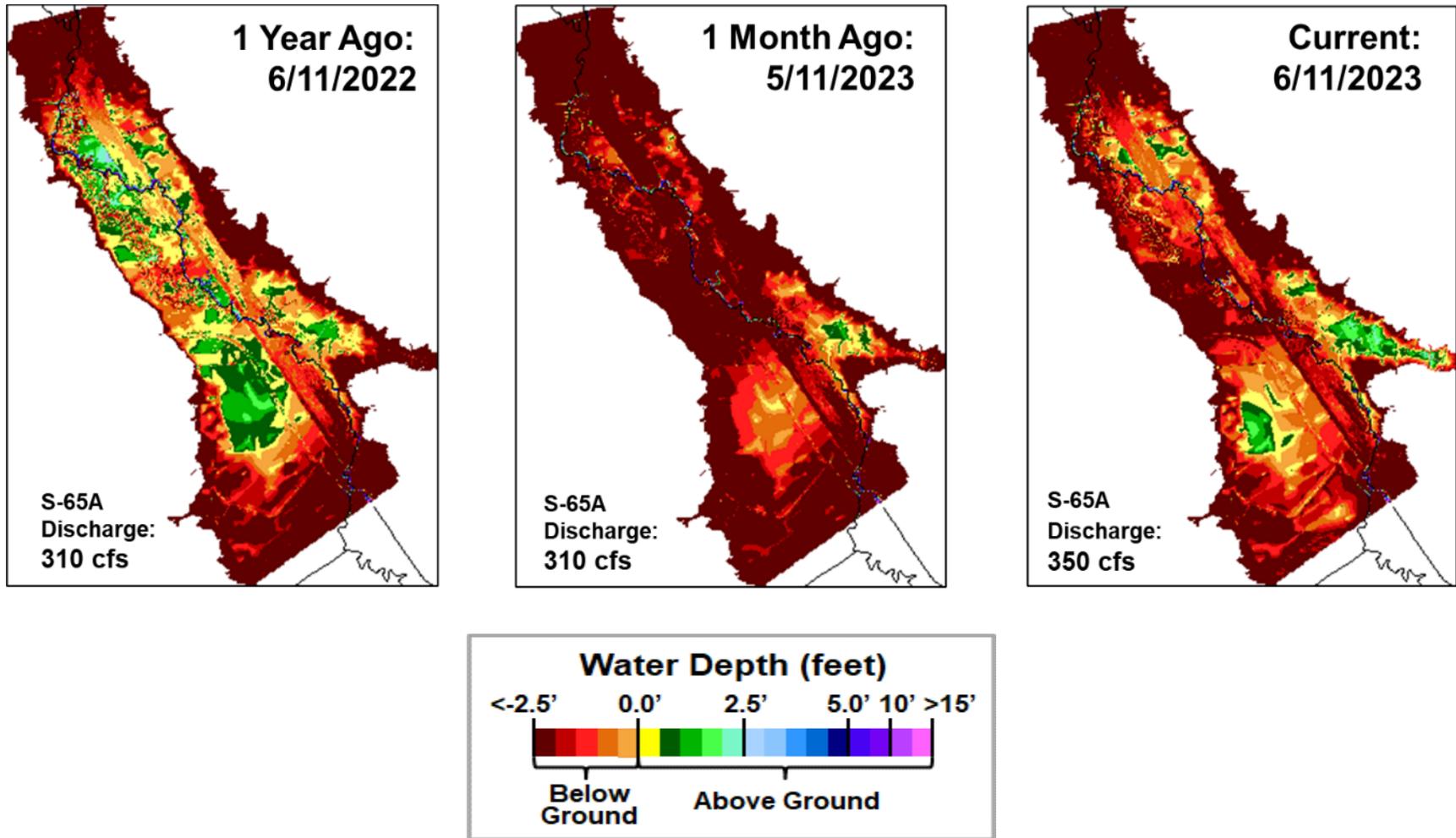


Figure KB-5. Phase I area Kissimmee River floodplain water depths (from left to right) one year ago, one month ago and current.

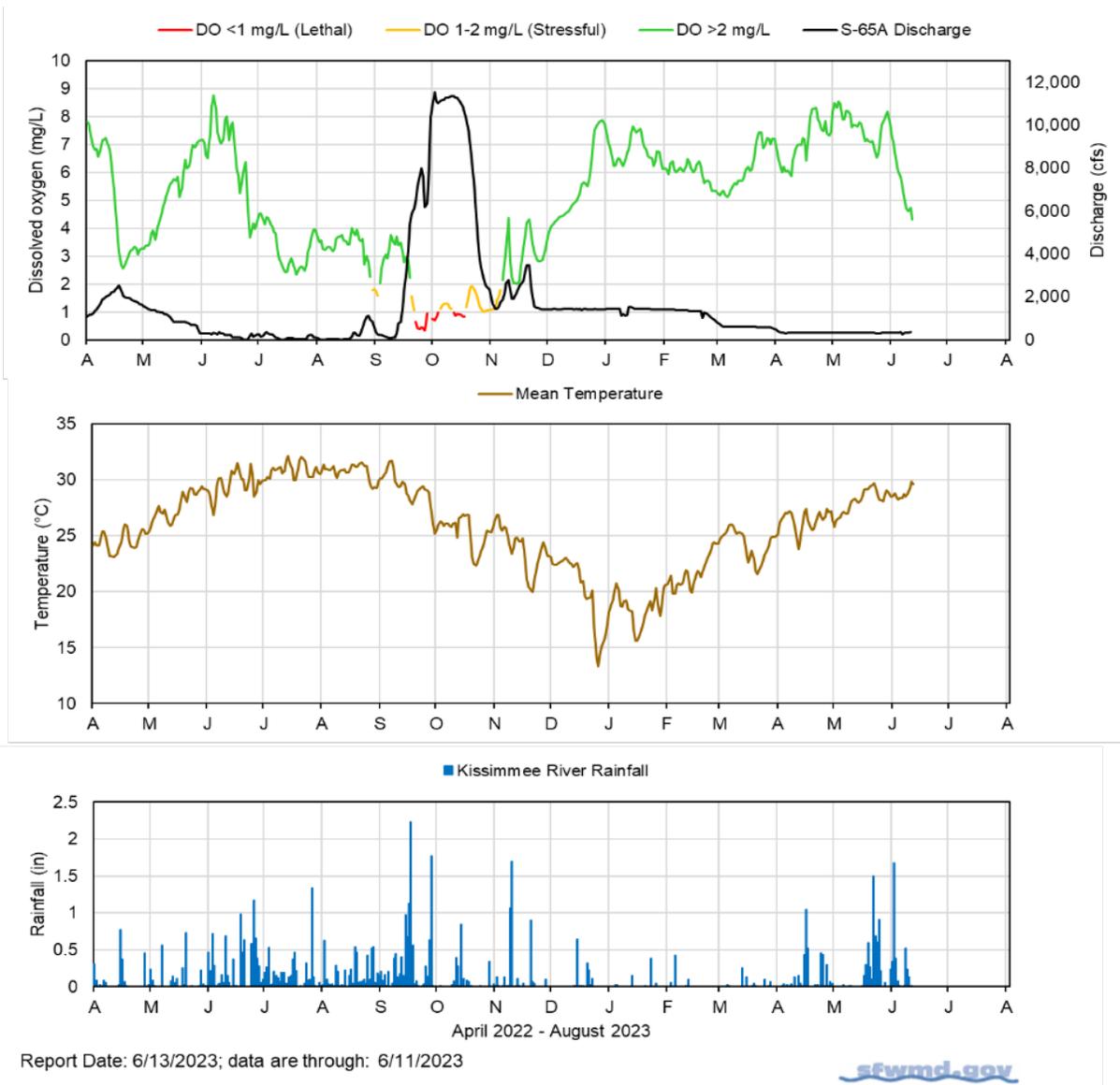


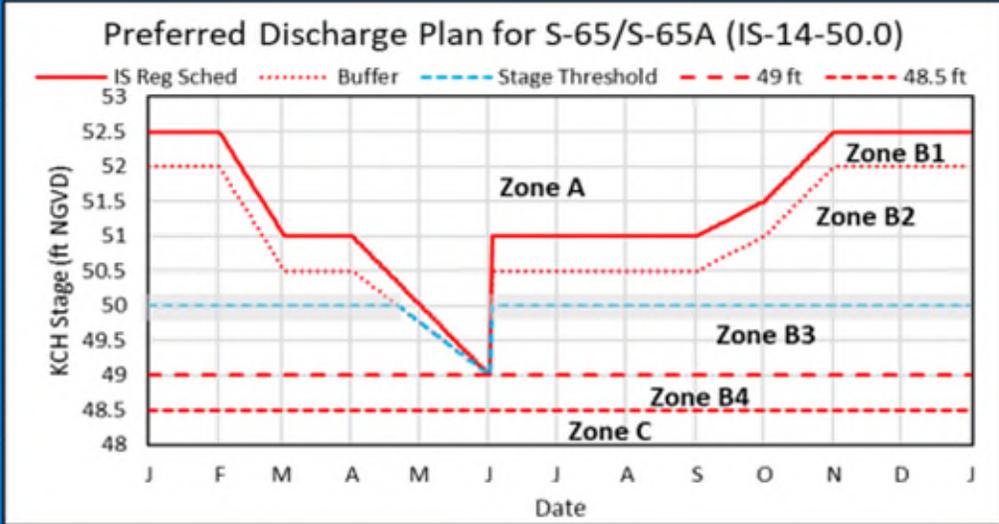
Figure KB-6. Restored Kissimmee river channel mean daily dissolved oxygen concentration (mg/L), S-65A discharge (cfs), temperature (°C) and rainfall (inches). Dissolved oxygen (DO) and temperature are mean daily values averaged for PC62, KRDR02, KRBN, PC33, PC11, PD62R, and PD42R with an average of four stations reporting this week. Rainfall values are daily totals for Kissimmee River (Pool BCD) AHED watershed.

| Stage and Discharge Guidance for 2021-2023. | | |
|---|--|--|
| Zone | KCH Stage (ft NGVD) | S-65/S-65A Discharge* |
| A | Above regulation schedule line. | Flood control releases as needed with no limits on the rate of discharge change. |
| B1 | In flood control buffer zone (0.5 ft below the schedule line). | Adjust S-65 discharge so that S-65A discharge is between 1400 cfs at the buffer zone line and 3000 cfs at the schedule line. |
| B2 | Between the Flood Control Buffer and the 50.0 ft line. | Adjust S-65 discharge to maintain at least 1400 cfs at S-65A. Use ± 0.2 ft buffer (gray band) above and below the 50.0 ft line to decide when to begin ramping up to 1400 cfs or down to 300 cfs; do not continue reducing discharge if stage rises back to or above the threshold stage line. |
| B3 | Between the 50.0 ft line and 49 ft. | Adjust S-65 discharge to maintain at least 300 cfs at S-65A. |
| B4 | Between 48.5 ft to 49 ft. | Adjust S-65 discharge to maintain S-65A discharge between 0 cfs at 48.5 ft and 300 cfs at 49 ft. |
| C | Below 48.5 ft. | 0 cfs. |

*Changes in discharge should not exceed limits in inset table below.

| Q (cfs) | Maximum rate of INCREASE (cfs/day) | Maximum rate of DECREASE (cfs/day) |
|-----------|------------------------------------|------------------------------------|
| 0-300 | 100 | -50 |
| 301-650 | 150 | -75 |
| 651-1400 | 300 | -150 |
| 1401-3000 | 600 | -600 |
| >3000 | 1000 | -2000 |

2021-2023 Discharge Plan for S-65/S-65A



- Other Considerations**
- When possible, limit lake ascension rate in the Jun 1 - Aug 15 window to 0.25 ft per 7 days in Lakes Kissimmee, Cypress, Hatchineha (S-65), East Toho (S-59) and Toho (S-61).
 - If outlook is for extreme dry conditions meet with KB staff to discuss modifications to this plan.

Slide Revised 1/3/2022

Figure KB-7. IS-14-50 Discharge Plan for S65/S65A with discharge rate of change limits (revised 1/14/19).

Lake Okeechobee

Lake Okeechobee stage was 14.04 feet NGVD on June 11, 2023, which is 0.06 feet higher than the previous week and 0.06 feet higher than a month ago (**Figure LO-1**). Lake stage remained in the Low sub-band (**Figure LO-2**) and was 1.41 feet above the upper limit of the ecological envelope (**Figure LO-3**). According to NEXRAD, 1.0 inch of rain fell directly on the Lake last week.

Average daily inflows (excluding rainfall) increased from the previous week, going from 1,239 cfs to 1,772 cfs. Average daily outflows (excluding evapotranspiration) decreased from the previous week, going from 511 cfs to 145 cfs. The greatest combined inflows came from the Indian Prairie watershed (809 cfs; highest inflow via S-84/84X (402 cfs)). The highest average single inflow came from the S-65E/EX1 structure (505 cfs). Outflows to the west via the S-77 structure averaged 145 cfs for the week. There were no outflows to the east via the S-308 structure or to the south via the S-350 structures. Backflows from the L-8 canal via the S-271 occurred at an average rate of 70 cfs. **Figures LO-4 and LO-5** show the combined average daily inflows and outflows for the Lake over the past eight weeks, and average inflows and outflows last week, respectively. These data are provisional and are subject to change.

The most recent satellite image (June 11, 2023) from NOAA's Harmful Algal Bloom Monitoring System showed the highest bloom potential in the southern and central regions of the Lake, with medium to high bloom potential in the western regions. Overall, bloom potential increased from the previous week (**Figure LO-6**).

Routine phytoplankton monitoring on June 6 - 8, revealed that total microcystins concentrations were above detection limit at 63% of the sites, with the highest concentration recorded at PALMOUT2 (16 µg/L). Concentrations at four sites (PALMOUT2, POLESOUT2, PELBAY3, LZ30) exceeded the EPA recreational standard of 8 µg/L (**Figure LO-7**). Additionally, 83% of the sites had communities dominated by *Microcystis aeruginosa* and the remaining sites had mixed communities.

No flocks of actively foraging wading birds were seen on the Lake during the June 8th survey (**Figure LO-8**).

Changes in Water Depth

1 Month Ago:
05/12/2023

Current:
06/11/2023

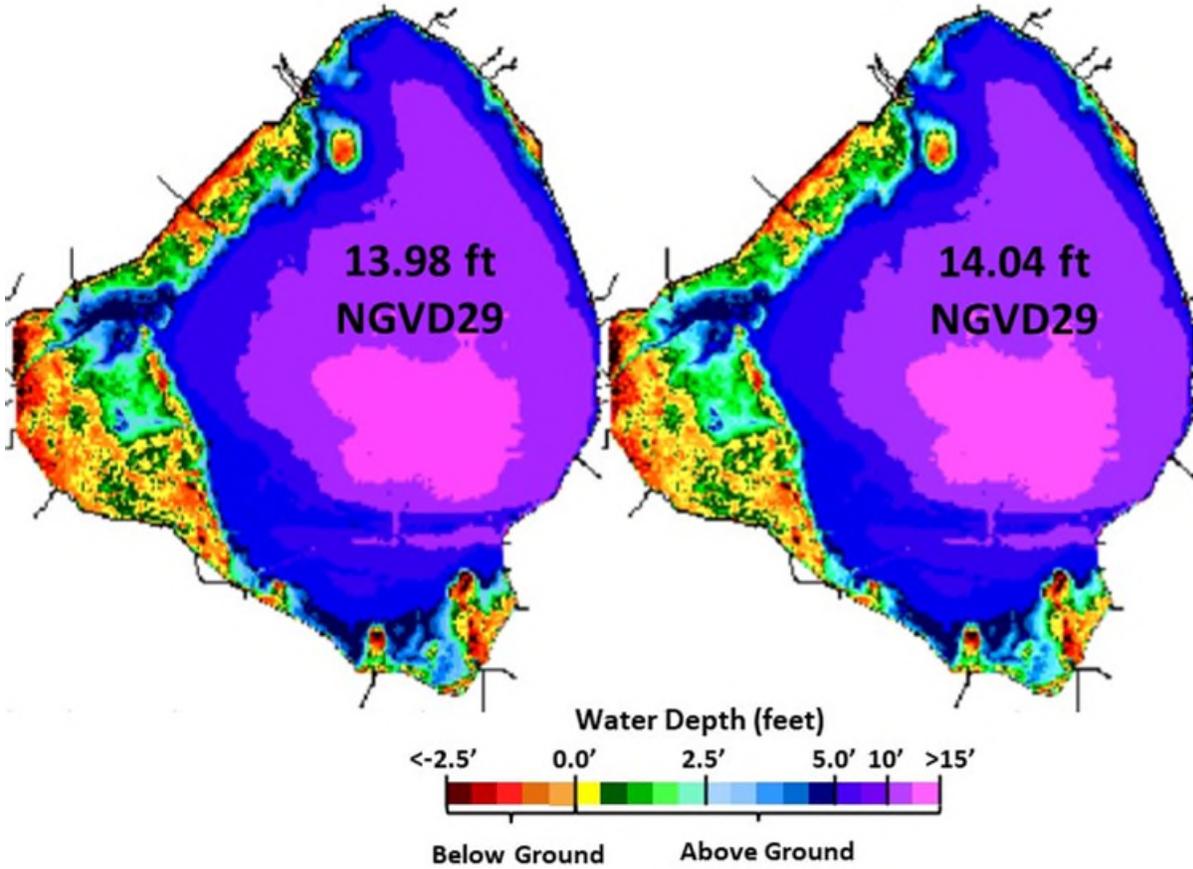
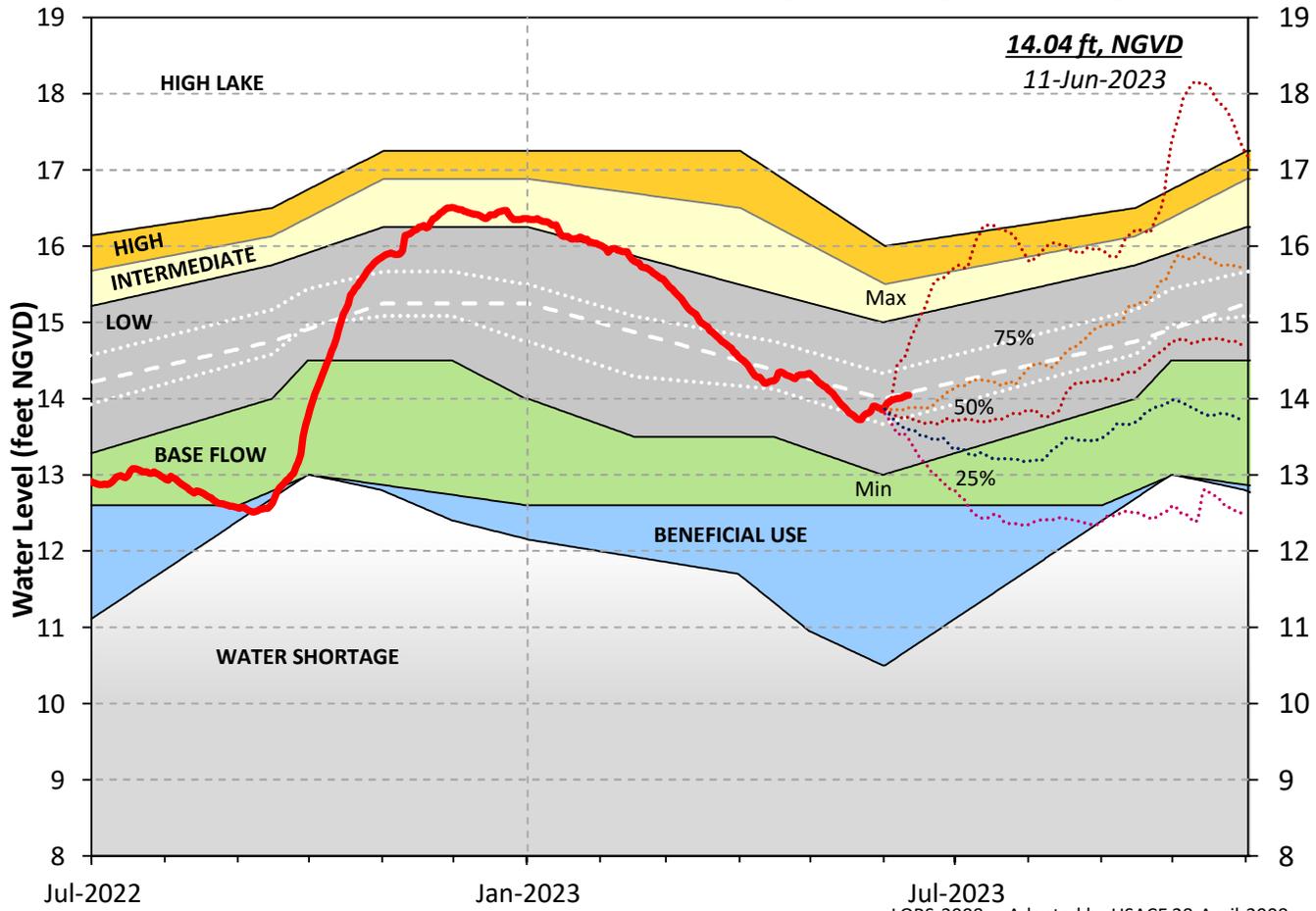


Figure LO-1. Lake Okeechobee water depth estimates based on South Florida Water Depth Assessment Tool (SFWDAT).

Lake Okeechobee Water Level History and Projected Stages



LORS-2008 - Adopted by USACE 28-April-2008

Figure LO-2. Recent Lake Okeechobee stages with projected stages based on a dynamic position analysis.

Lake Okeechobee Stage vs Ecological Envelope

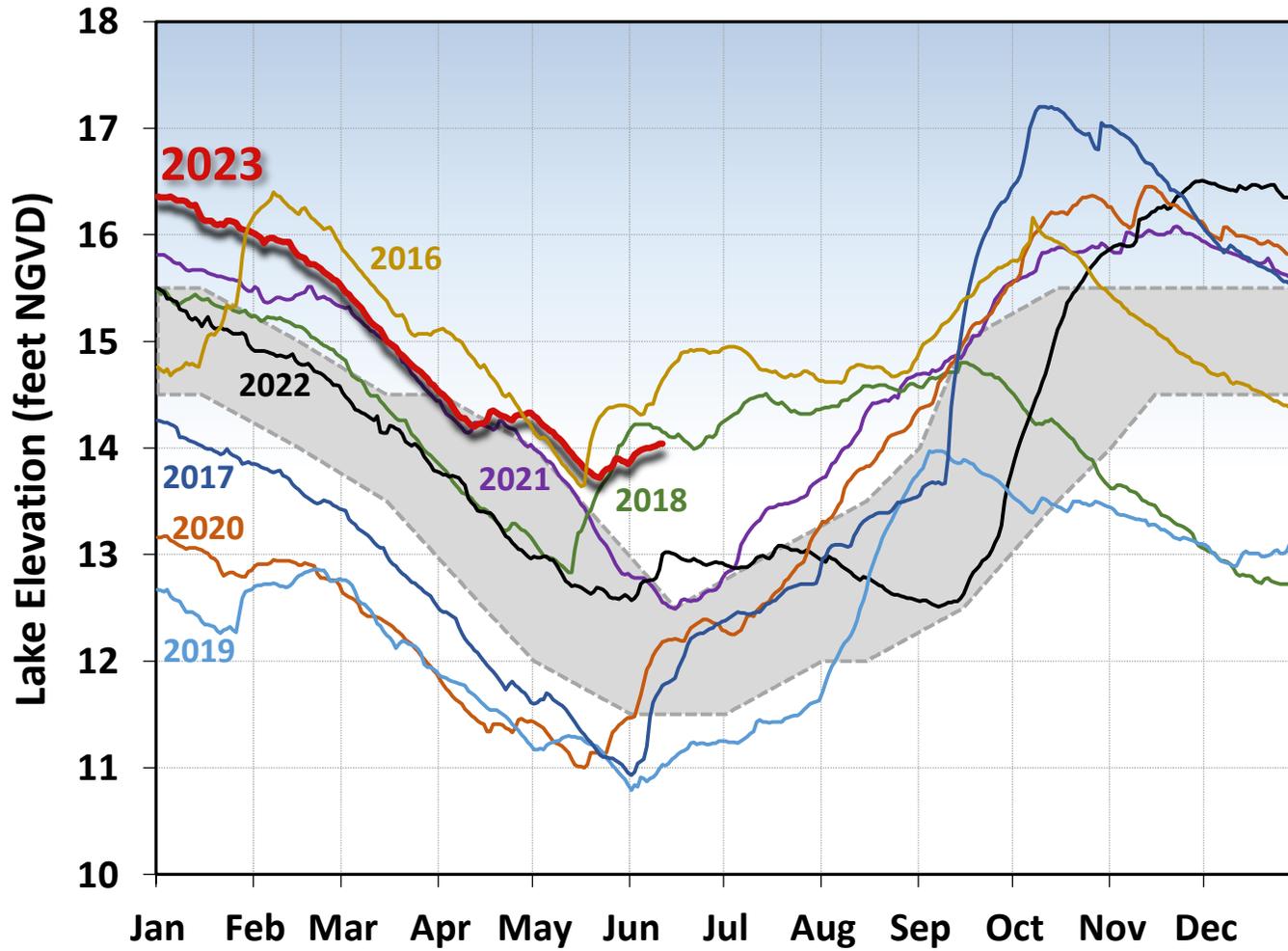


Figure LO-3. The prior seven years of annual stage hydrographs for Lake Okeechobee in comparison to the ecological envelope.

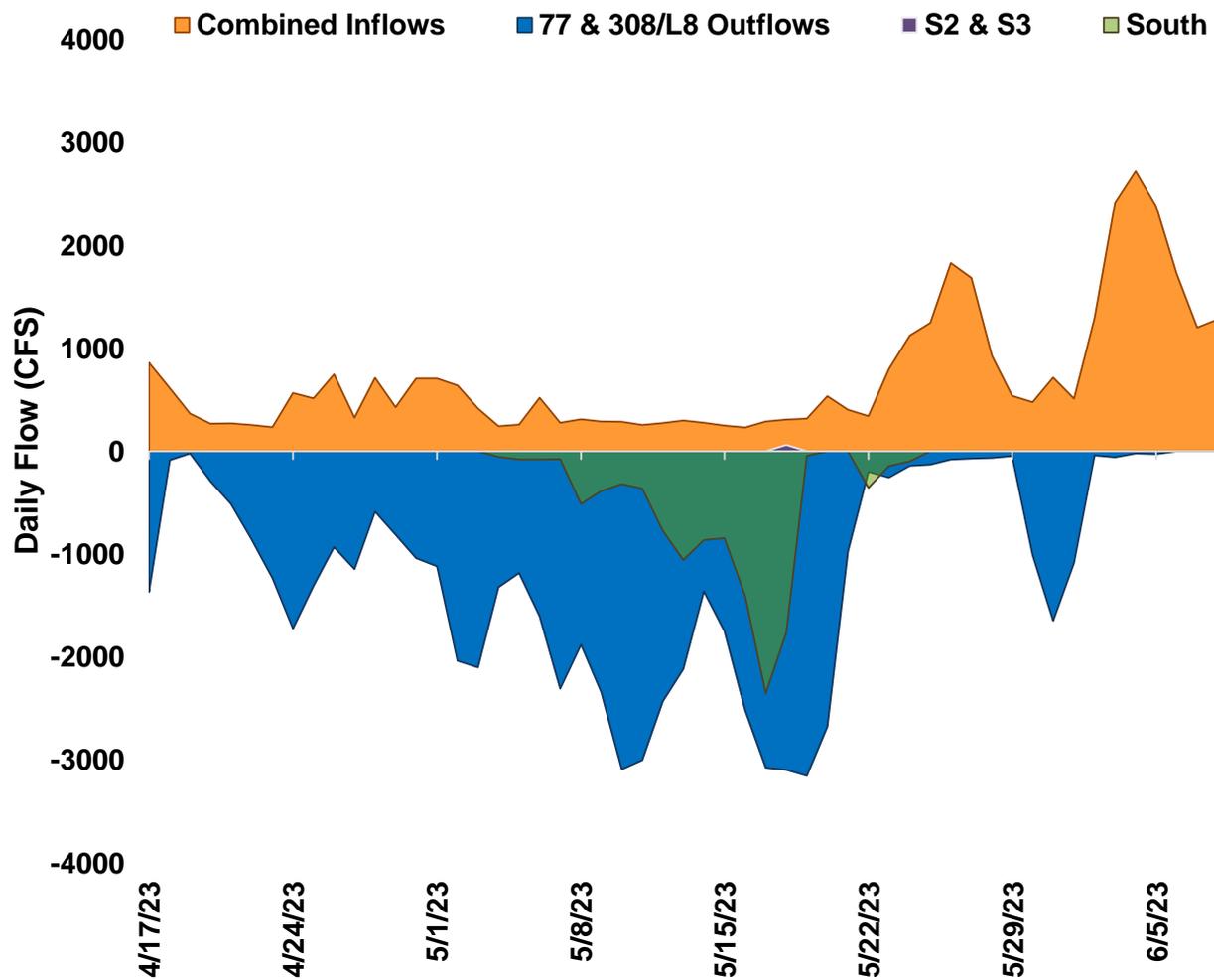


Figure LO-4. Major inflows (orange) to and outflows east and west (blue) from Lake Okeechobee. Outflows south are shown in green. Flows into Lake Okeechobee from the L-8 canal through S-271 (formerly Culvert 10A) or from the C-44 canal through the S-308 are included as inflows. Conversely, flows from Lake Okeechobee into the L-8 or C-44 canals are included with outflows. Inflows are shown as positive values; outflows are negative. Outflows through the S-77 (Caloosahatchee) and S-308 (C-44 Canal) structures are based on downstream gauges to include flows to lock openings for navigation.

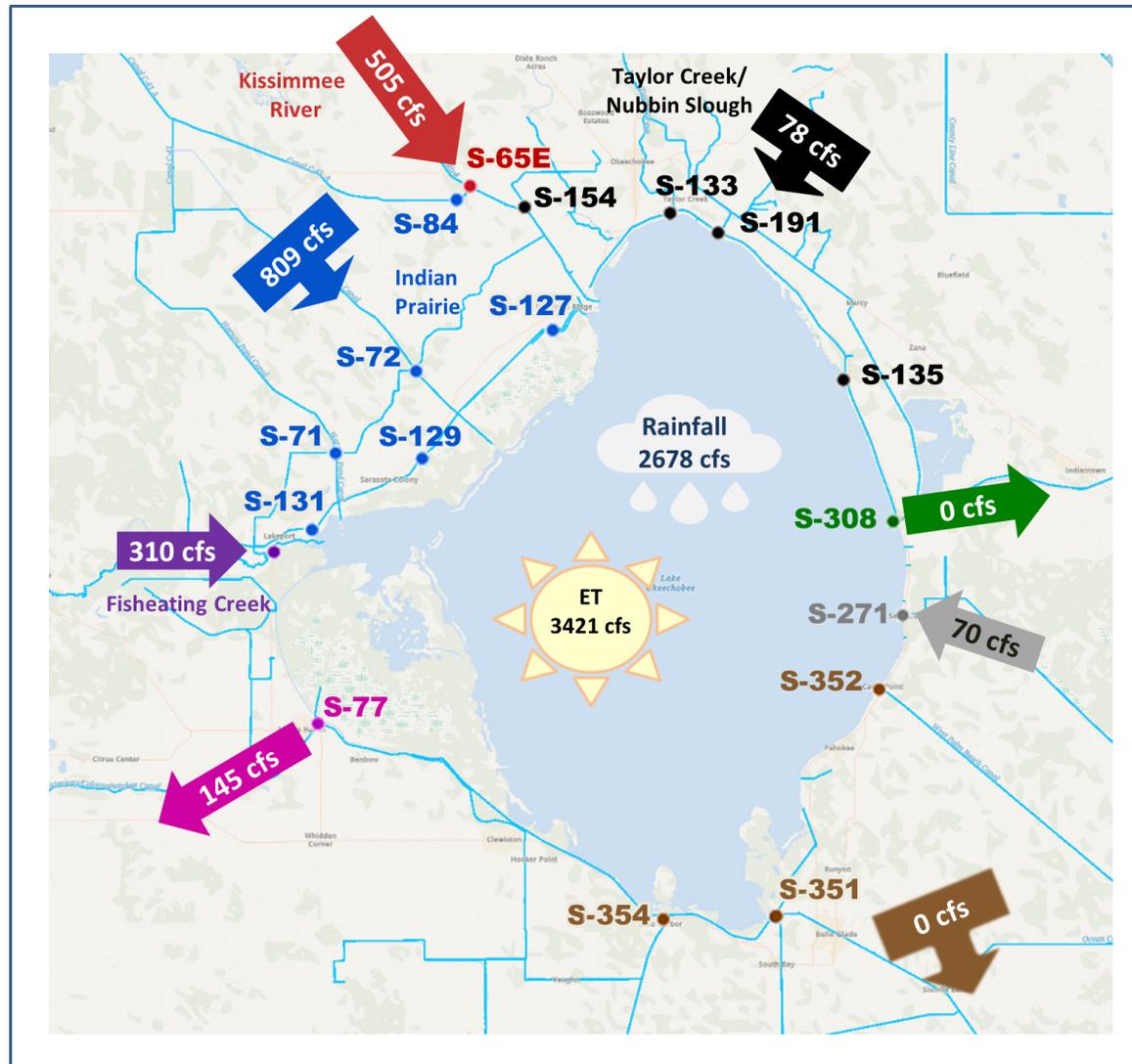


Figure LO-5. Inflows into Lake Okeechobee from Indian Prairie basins, Taylor Creek/Nubbin Slough, Kissimmee River and Fisheating Creek, and outflows to the west via S-77, to the east via S-308, to the south via S-351, S-352, S-354, and to southeast via S-271 (formerly Culvert 10A) for the week of June 5 - 11, 2023.

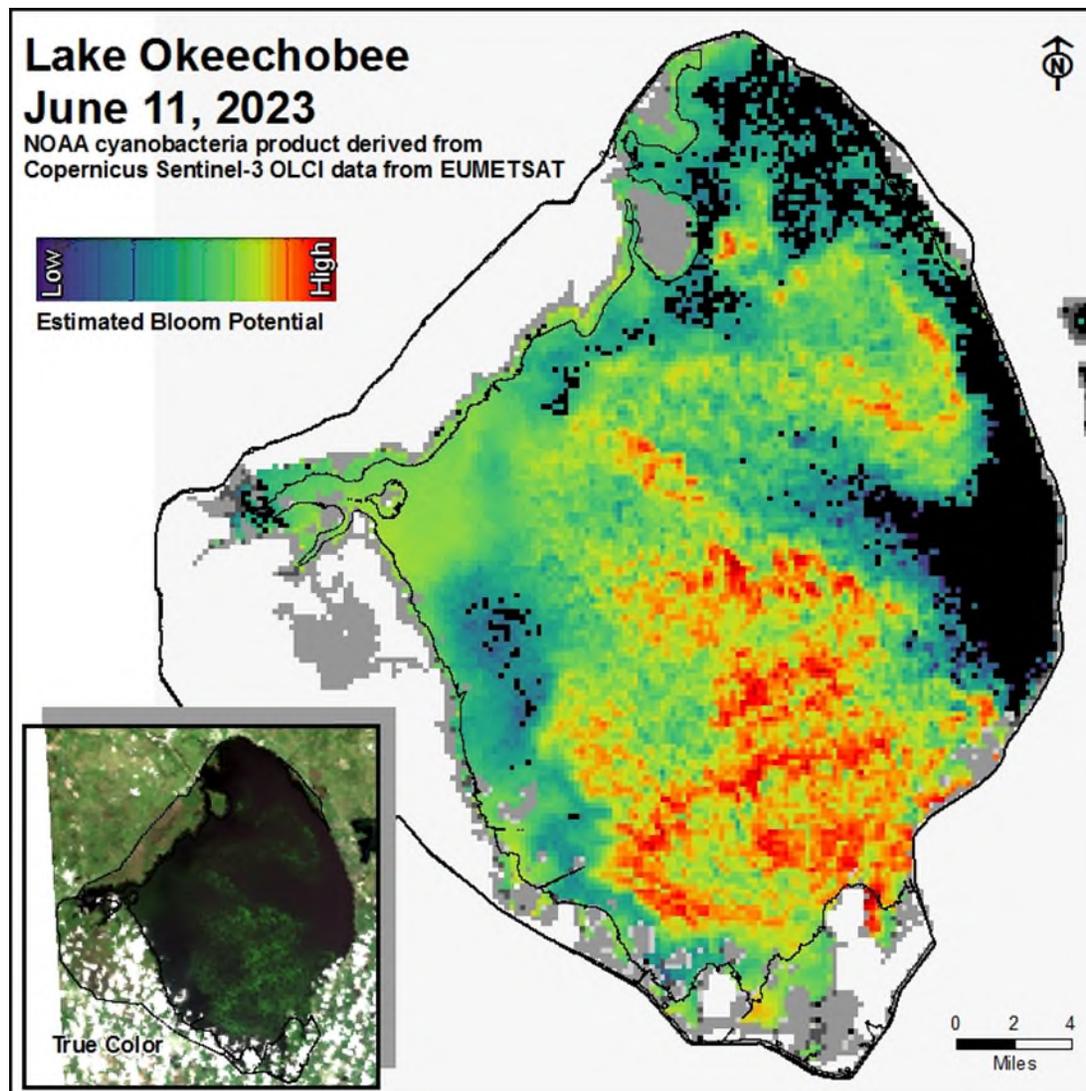


Figure LO-6. Cyanobacteria bloom potential on, June 11, 2023, based on NOAA's harmful algal bloom monitoring system. Gray color indicates cloud cover.

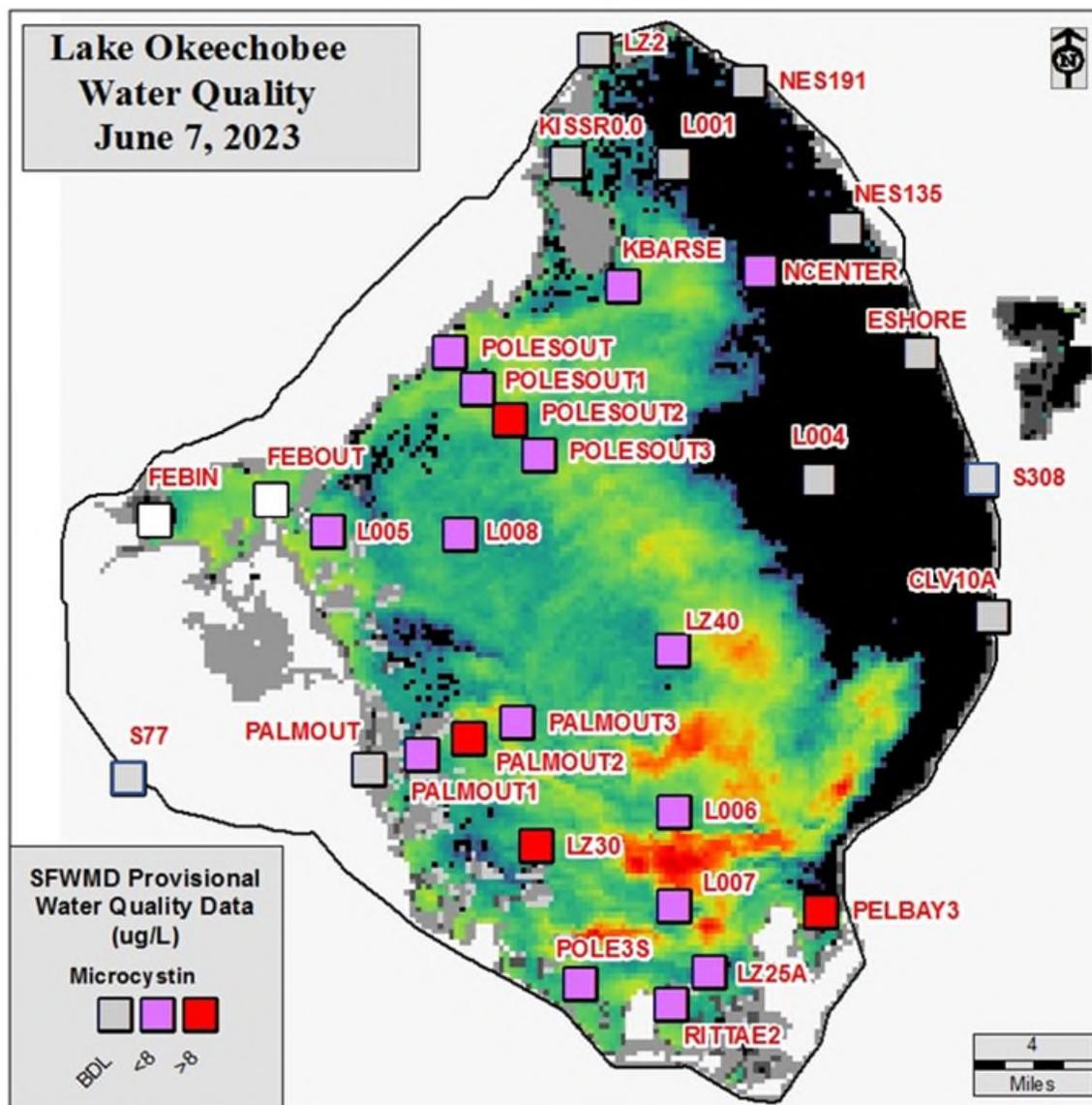


Figure LO-7. Total microcystins ($\mu\text{g/L}$) data from June 6 - 8, 2023. Sampling locations and total microcystins concentrations are overlaid on the June 7, 2023 image from NOAA's harmful algal bloom monitoring system. Gray color indicates cloud cover.

**Wading Bird
Foraging Locations
June 8, 2023**

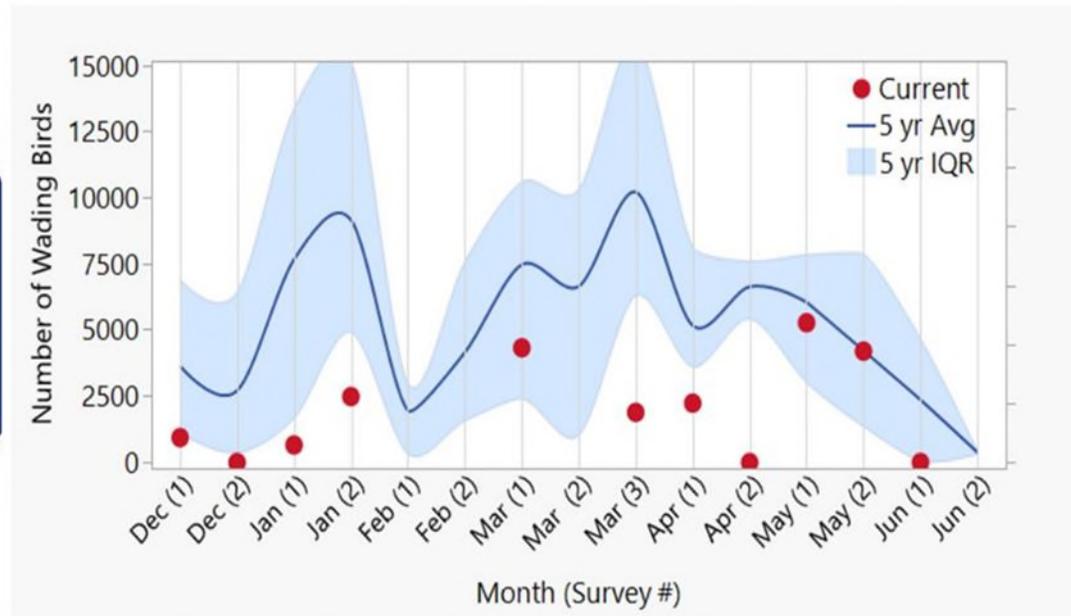
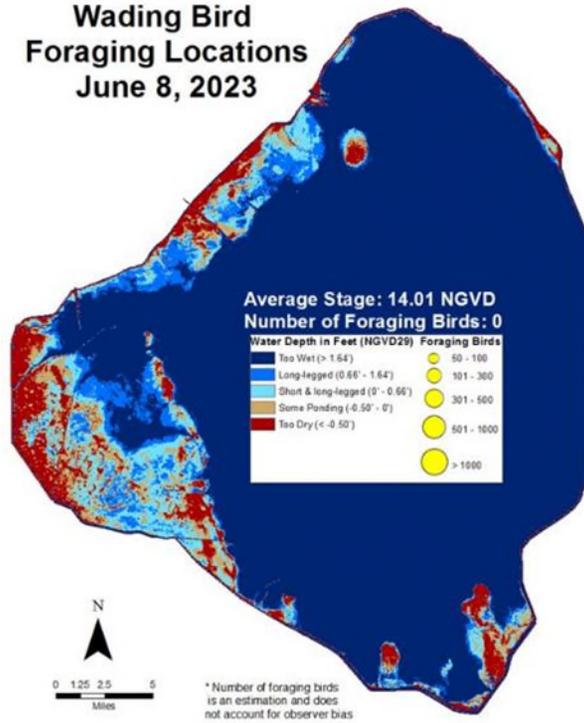


Figure LO-8. Results from the Wading Bird surveys conducted on June 8, 2023. The graph shows changes in the total number of actively foraging wading birds between January and June, 2023 (red dots) compared to the five-year average (blue line).

Estuaries

St. Lucie Estuary

Over the past week, mean total inflow to the St. Lucie Estuary was 902 cfs (**Figures ES-1 and ES-2**), and the previous 30-day mean inflow was 991 cfs. For comparison, the historical provisional mean inflows from the contributing areas are shown in **Figure ES-2**.

Over the past week, salinities decreased at HR1 and increased at the A1A Bridge and US1 Bridge sites (**Table ES-1 and Figure ES-3**). The seven-day moving average of the surface and bottom salinities at the US1 Bridge was 13.4. Salinity conditions in the middle estuary were estimated to be within the optimal range for adult eastern oysters (**Figure ES-4**). The mean larval oyster recruitment rate reported by the Fish and Wildlife Research Institute (FWRI) was 0.08 spat/shell for May, which is a decrease from the recruitment rate recorded in April (**Figure ES-5**).

Caloosahatchee River Estuary

Over the past week, mean total inflow to the Caloosahatchee River Estuary was 3,898 cfs (**Figures ES-6 and ES-7**), and the previous 30-day mean inflow was 2,522 cfs. For comparison, the historical provisional mean inflows from the contributing areas are shown in **Figure ES-7**.

Over the past week, salinities decreased at all sites within the estuary (**Table ES-2 and Figures ES-8 and ES-9**). The seven-day mean salinities (**Table ES-2**) were in the optimal range (0-10) for tape grass in the upper estuary. The seven-day mean salinity values were within the optimal range for adult eastern oysters at Shell Point, and in the stressed range at Cape Coral and Sanibel (**Figure ES-10**). The mean larval oyster recruitment rates reported by the Fish and Wildlife Research Institute were 3.9 spat/shell at Iona Cove and 4.0 spat/shell at Bird Island for May, both of which are an increase from April recruitment rates (**Figures ES-11 and ES-12**).

Surface salinity at Val I-75 was forecasted for the next two weeks using an autoregression model (Qiu and Wan, 2013¹) coupled with a linear reservoir model for the tidal basin. Model scenarios included pulse releases at S-79 ranging from 0 to 1,500 cfs, and a steady release at 2,000 cfs with estimated tidal basin inflows of 190 cfs. Model results from all scenarios predict daily salinity to be 0.7 or lower and the 30-day moving average surface salinity to be 0.4 or lower at Val I-75 at the end of the two-week period (**Table ES-3 and Figure ES-13**). This keeps predicted salinities in the upper estuary within the optimal salinity range (0-10) for tape grass.

¹ Qiu, C., and Y. Wan. 2013. Time series modeling and prediction of salinity in the Caloosahatchee River Estuary. *Water Resources Research* 49:5804-5816.

Red Tide

The Florida Fish and Wildlife Research Institute reported on June 9, 2023, that *Karenia brevis*, the Florida red tide dinoflagellate, was not observed at bloom concentrations in any samples collected from within the District region. On the east coast, red tide was not observed in samples from St. Lucie, Martin, or Palm Beach counties.

Water Management Recommendations

Lake stage is in the Low Sub-Band. Tributary conditions are near normal. The LORS2008 release guidance suggests up to 3,000 cfs release at S-79 to the Caloosahatchee River Estuary and up to 1,170 cfs release at S-80 to the St. Lucie Estuary.

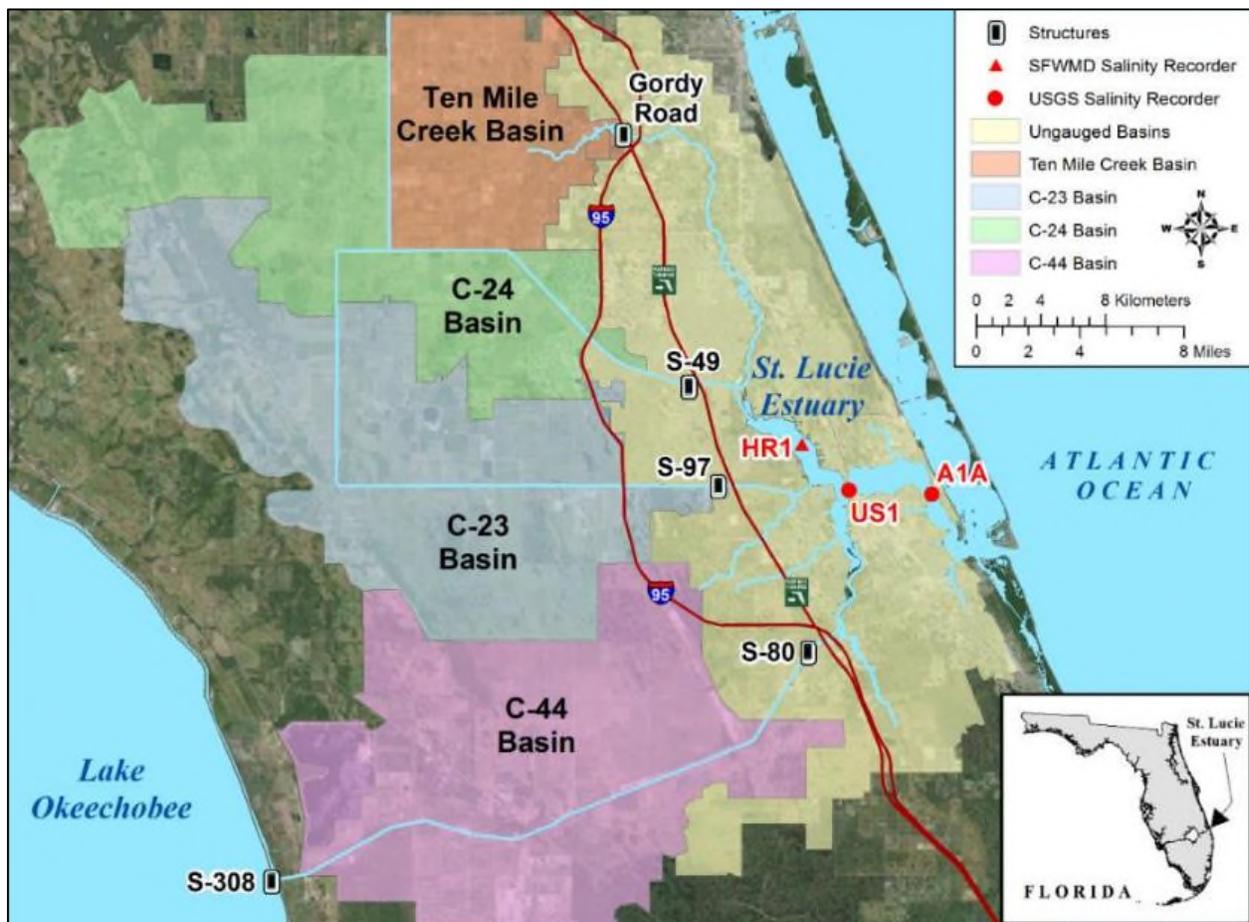


Figure ES-1. Basins, water control structures and salinity monitoring sites in the St. Lucie Estuary.

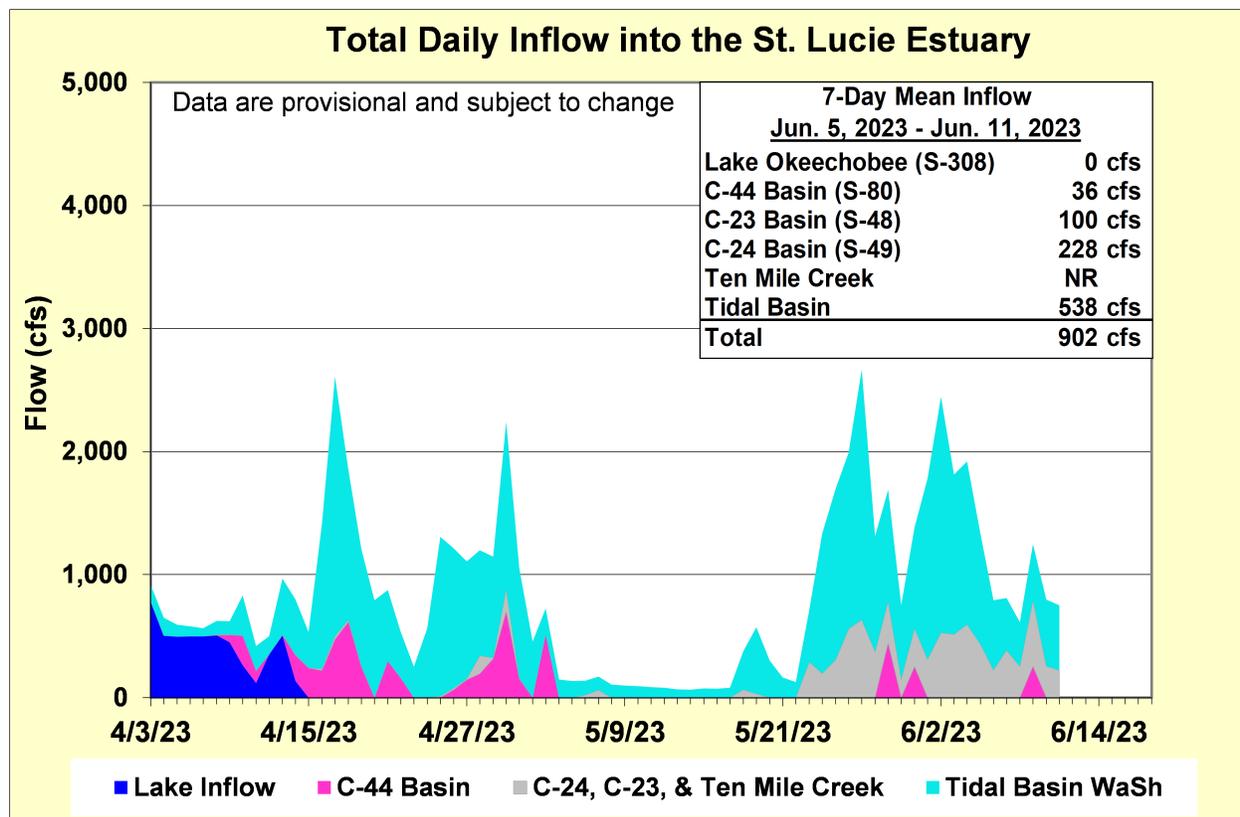


Figure ES-2. Total daily inflows from Lake Okeechobee and runoff from the C-44, C-23, C-24, Ten Mile Creek, and Tidal Basins into the St. Lucie Estuary.

Table ES-1. Seven-day mean salinity at oyster monitoring sites in the St. Lucie Estuary. Current means are in bold font; previous week's means are in parentheses. The envelope reflects the optimum salinity range for adult eastern oysters (*Crassostrea virginica*) in the estuary. Data are provisional.

| Sampling Site | Surface | Bottom | Optimum Envelope |
|------------------|--------------------|--------------------|------------------|
| HR1 (North Fork) | 6.4 (6.8) | 11.0 (12.9) | 10.0 – 25.0 |
| US1 Bridge | 12.1 (11.6) | 14.7 (14.1) | 10.0 – 25.0 |
| A1A Bridge | 20.4 (20.3) | 25.9 (25.7) | 10.0 – 25.0 |

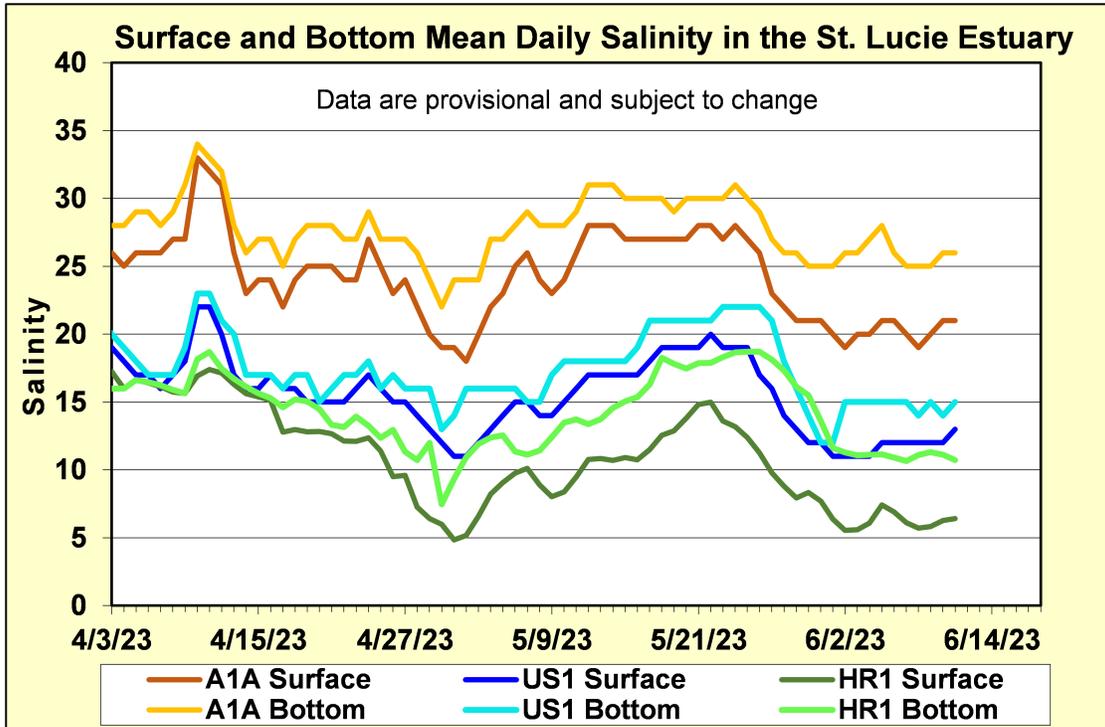


Figure ES-3. Mean daily salinity at the A1A, US1 and HR1 sites in the St. Lucie Estuary.

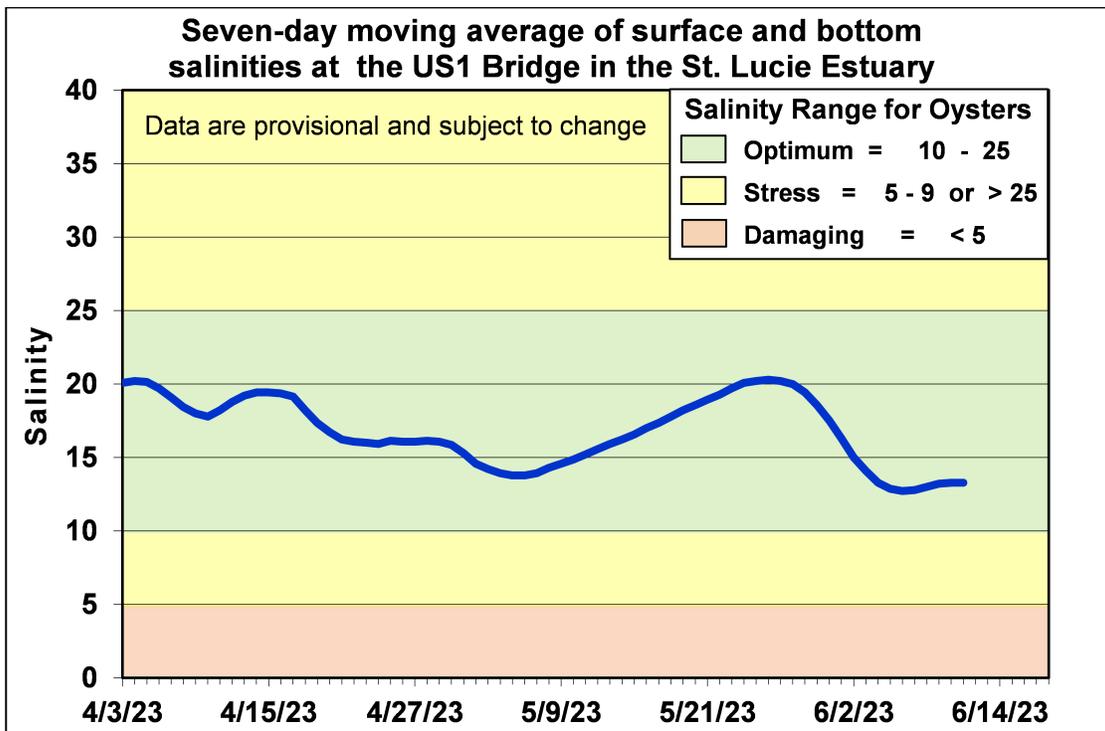


Figure ES-4. Seven-day moving average of the surface and bottom salinities at the US1 Bridge in the St. Lucie Estuary.

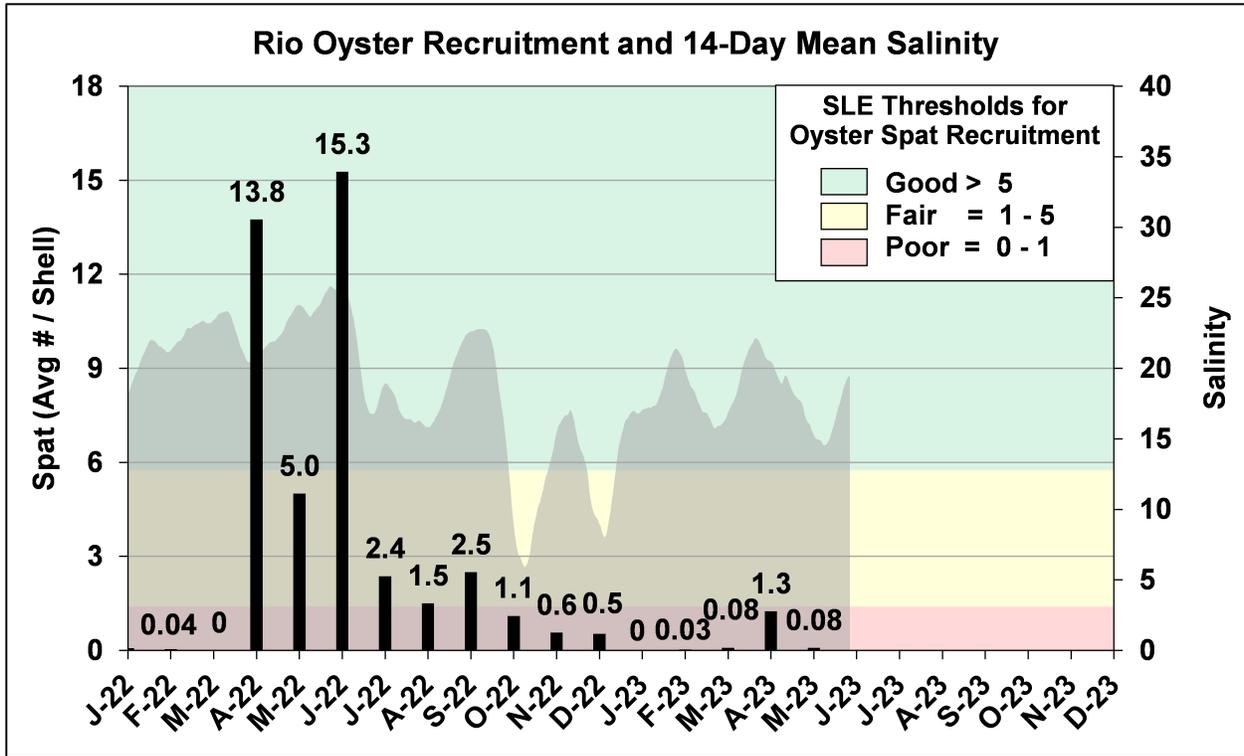


Figure ES-5. Mean oyster recruitment at the Rio oyster monitoring station and 14-day mean salinity at US1 Bridge.

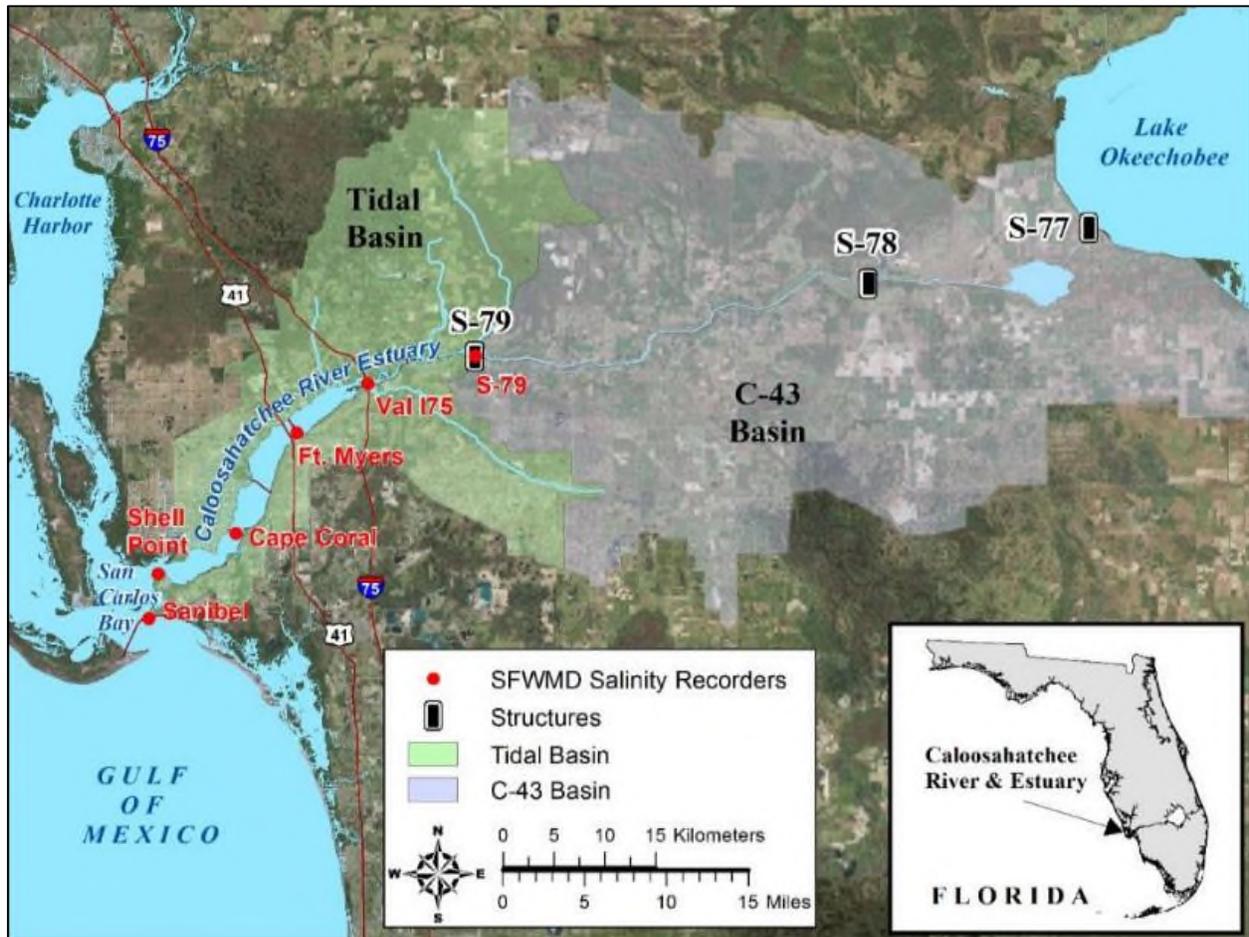


Figure ES-6. Basins, water control structures and salinity monitoring sites in the Caloosahatchee River Estuary.

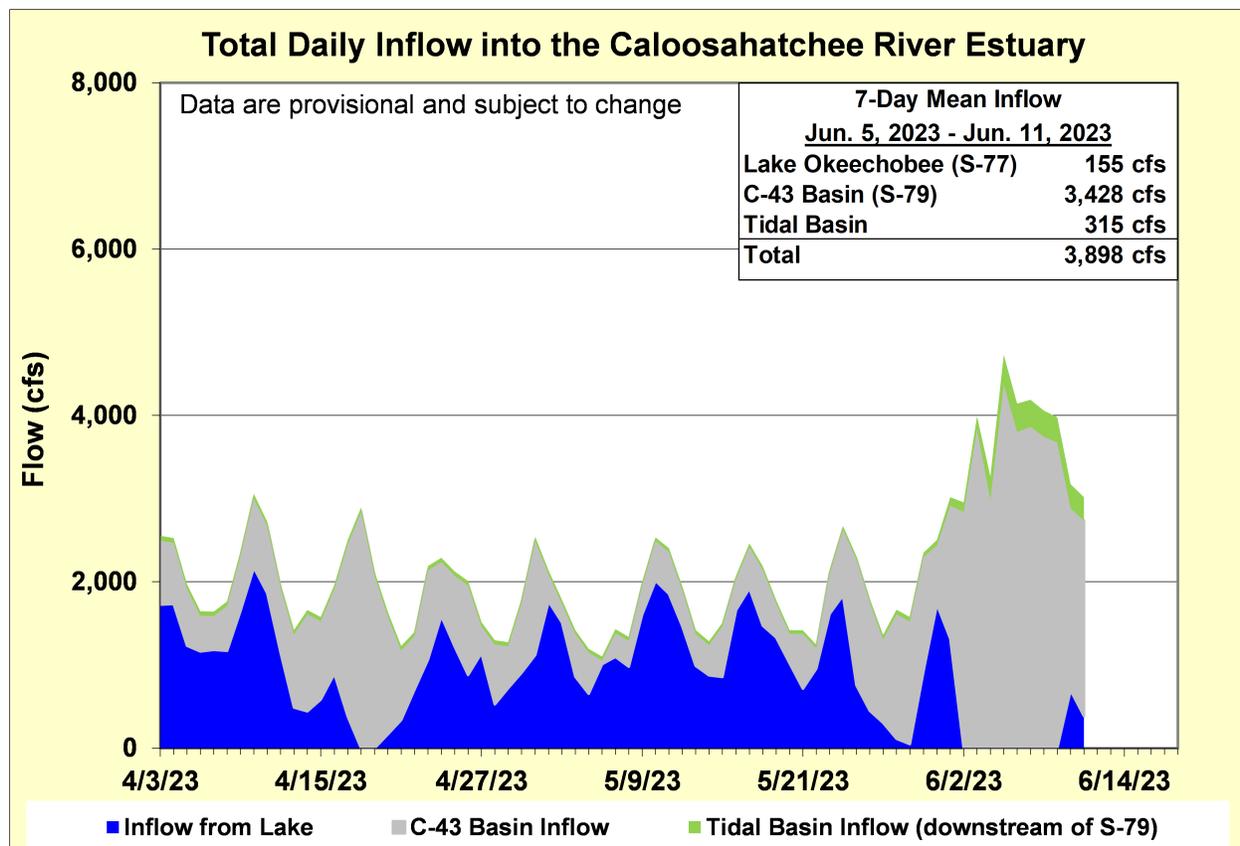


Figure ES-7. Total daily inflows from Lake Okeechobee, and runoff from the C-43 and Tidal basins into the Caloosahatchee River Estuary.

Table ES-2. Seven-day mean salinity at six monitoring sites in the Caloosahatchee River Estuary. Current means are in bold font; previous week's means are in parentheses. The envelope in the upper estuary sites is for the protection of tape grass and the envelope in the lower estuary is the optimum salinity range for adult eastern oysters (*Crassostrea virginica*). Data are provisional.

| Sampling Site | Surface | Bottom | Optimum Envelope |
|------------------------|--------------------|--------------------|------------------|
| S-79 (Franklin Lock) | 0.2 (0.5) | 0.2 (0.5) | 0.0 – 10.0 |
| Val I-75 | 0.3 (0.8) | 0.2 (0.9) | 0.0 – 10.0 |
| Fort Myers Yacht Basin | 2.0 (5.3) | 2.8 (6.7) | 0.0 – 10.0 |
| Cape Coral | 8.6 (11.1) | 10.2 (13.4) | 10.0 – 25.0 |
| Shell Point | 24.0 (25.4) | 24.9 (26.3) | 10.0 – 25.0 |
| Sanibel | 29.5 (31.1) | 30.8 (32.0) | 10.0 – 25.0 |

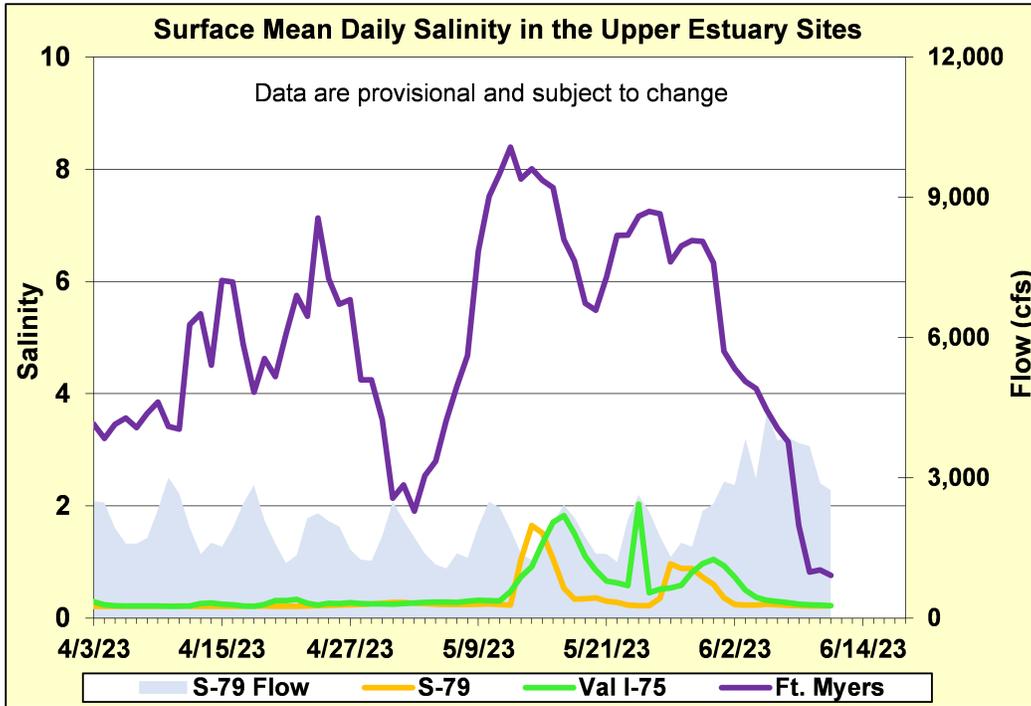


Figure ES-8. Mean daily salinity at upper Caloosahatchee River Estuary monitoring sites and mean daily flow at S-79.

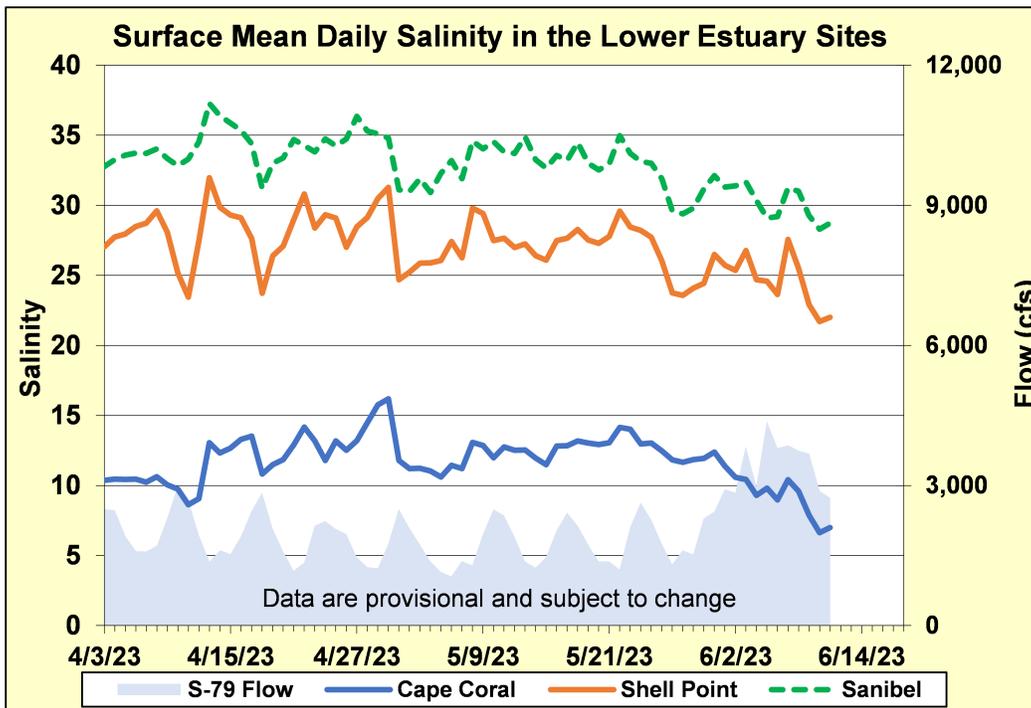


Figure ES-9. Mean daily surface salinity at lower Caloosahatchee River Estuary monitoring sites and mean daily flow at S-79.

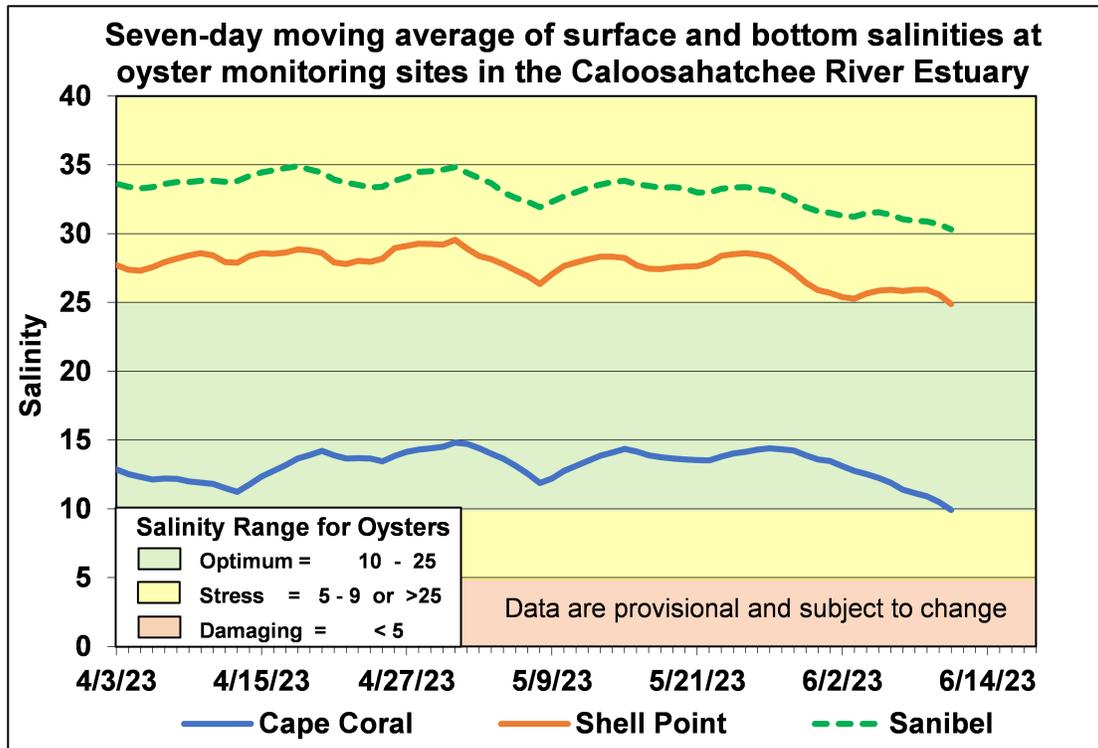


Figure ES-10. Seven-day moving average of surface and bottom salinities at Cape Coral, Shell Point and Sanibel monitoring sites in the Caloosahatchee River Estuary.

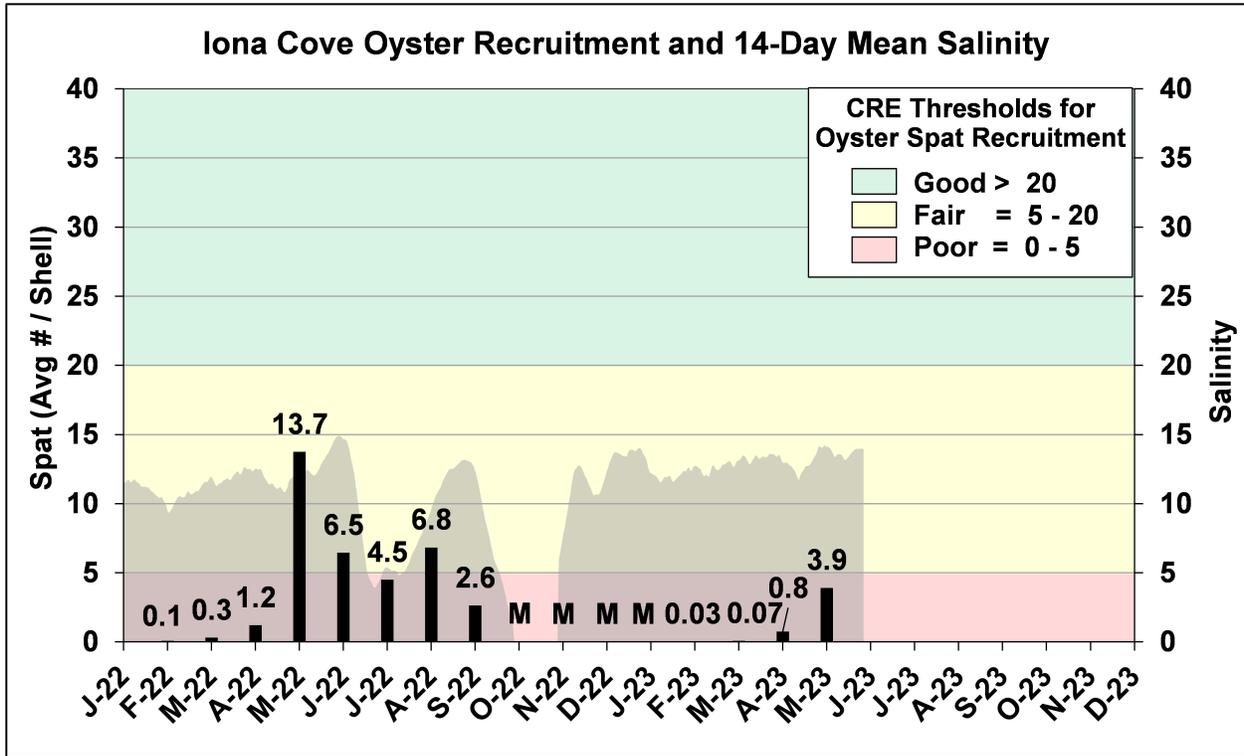


Figure ES-11. Mean oyster recruitment at the Iona Cove oyster monitoring station and 14-day mean salinity at Cape Coral.

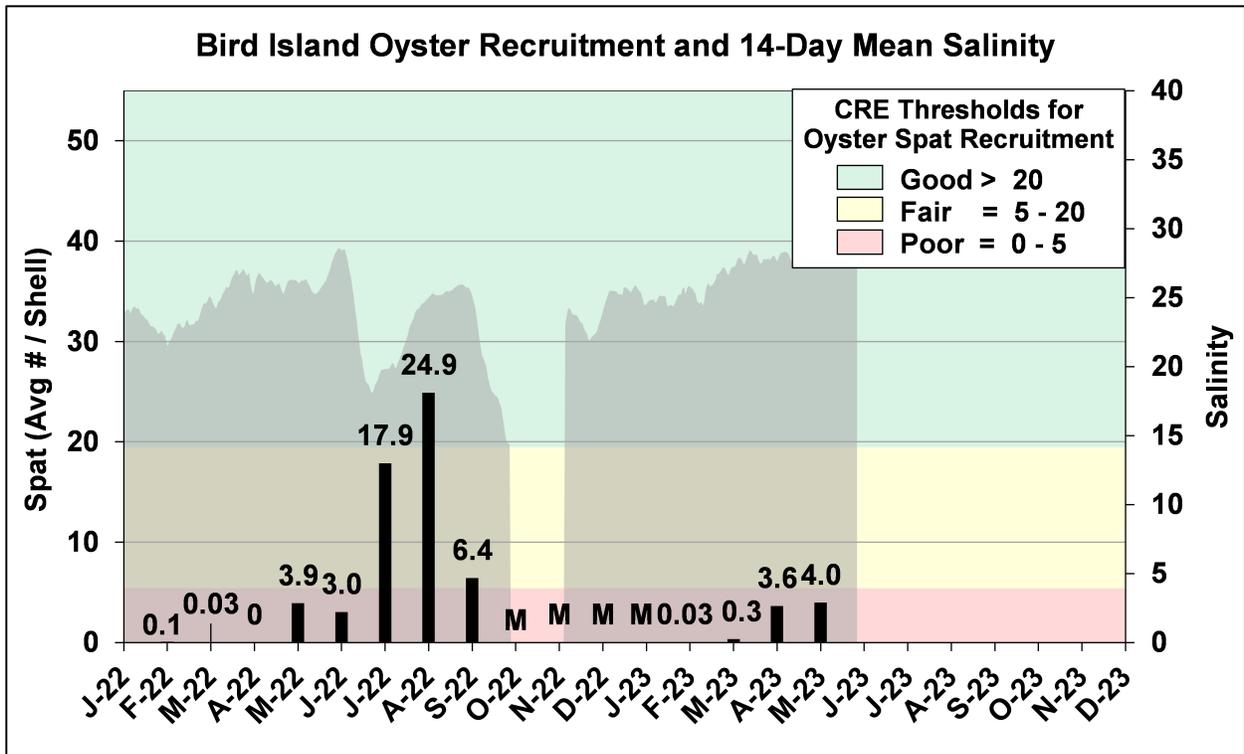


Figure ES-12. Mean oyster recruitment at the Bird Island oyster monitoring station and 14-day mean salinity at Shell Point.

Table ES-3. Predicted salinity at Val I-75 in the Caloosahatchee River Estuary at the end of the forecast period for various S-79 flow release scenarios.

| Scenario | Simulated S-79 Flow (cfs) | Tidal Basin Runoff (cfs) | Daily Salinity | 30-Day Mean Salinity |
|----------|---------------------------|--------------------------|----------------|----------------------|
| A | 0 | 190 | 0.7 | 0.4 |
| B | 450 | 190 | 0.4 | 0.4 |
| C | 750 | 190 | 0.3 | 0.4 |
| D | 1,000 | 190 | 0.3 | 0.4 |
| E | 1,500 | 190 | 0.3 | 0.4 |
| F | 2,000 | 190 | 0.3 | 0.4 |

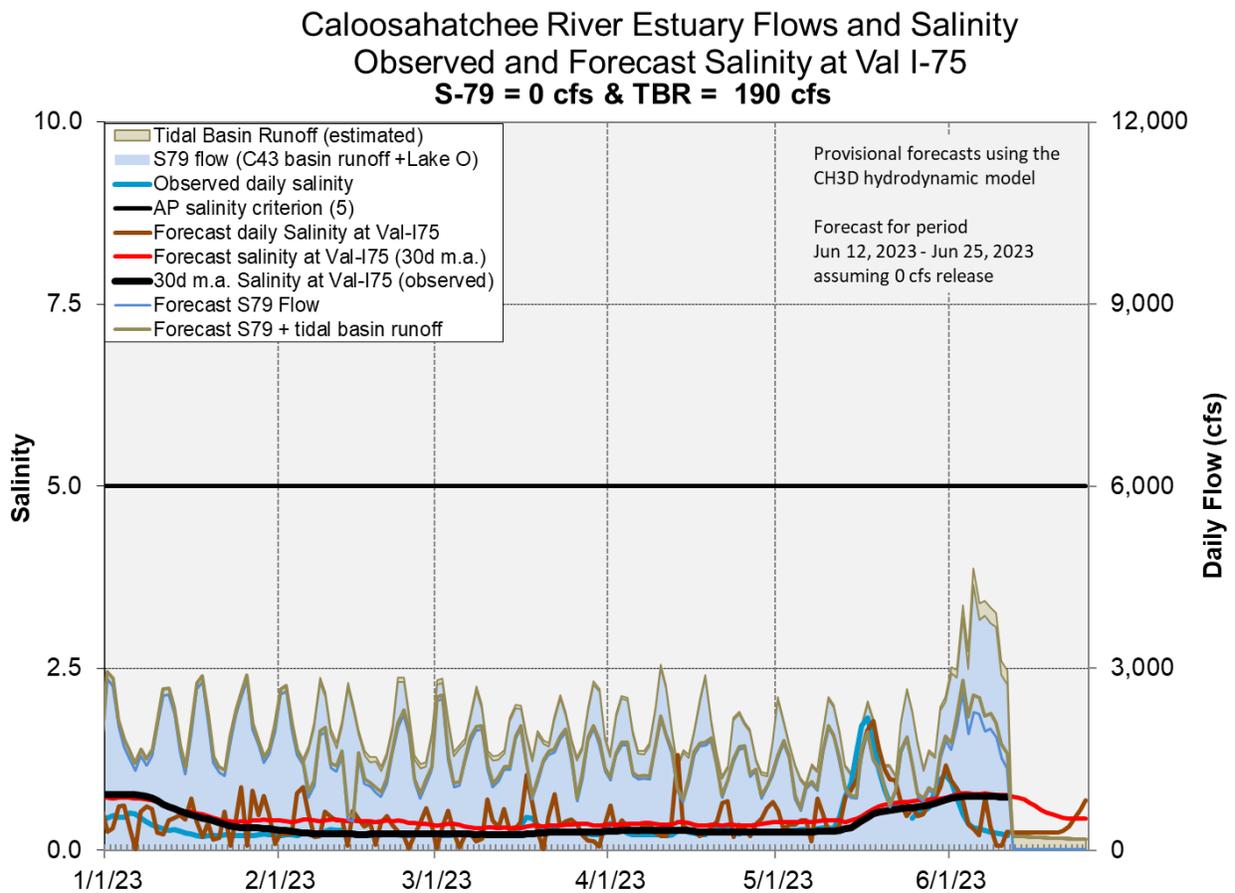


Figure ES-13. Forecasted Val I-75 site surface salinity assuming no pulse release at S-79.

Stormwater Treatment Areas

STA-1E: STA-1E Western Flow-way is offline for post-construction vegetation grow in and the Central Flow-way is offline for a Refurbishments project survey. Operational restrictions are in place in STA-1E Eastern Flow-way for vegetation management activities. The Central Flow-way contains nests of Migratory Bird Treaty Act protected species. Online treatment cells are above target stage. Vegetation in the flow-ways is stressed and highly stressed. The 365-day phosphorus loading rate (PLR) for the Eastern Flow-way is below $1.0 \text{ g/m}^2/\text{year}$. The 365-day PLR for the Central Flow-way is high (**Figure S-1**).

STA-1W: Operational restrictions are in place in STA-1W Western, Eastern, and Northern Flow-ways for vegetation management activities. The Northern Flow-way, Cell 7 and Cell 8 contain nests of Migratory Bird Treaty Act protected species. Most treatment cells are above target stage. Vegetation in the flow-ways is stressed and highly stressed. The 365-day PLR for the Eastern Flow-way is below $1.0 \text{ g/m}^2/\text{year}$. The 365-day PLRs for the Northern and Western Flow-way are high (**Figure S-2**).

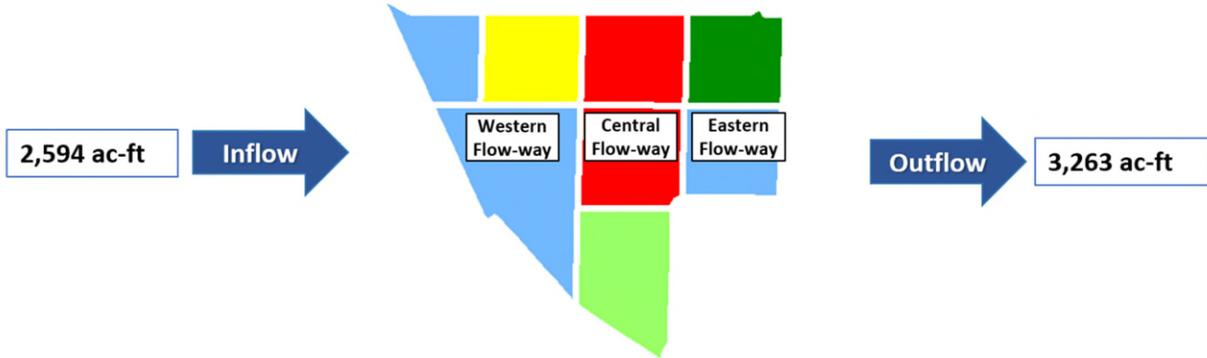
STA-2: STA-2 Flow-way 2 is offline for post-construction vegetation grow in. Operational restrictions are in place in STA-2 Flow-ways 3 and 4 for vegetation management activities. Flow-way 3 contains nests of Migratory Bird Treaty Act protected species. Most online treatment cells are above target stage. Vegetation in Flow-ways 1 and 3 is stressed, and in Flow-ways 2, 4 and 5 is highly stressed. The 365-day PLRs for Flow-ways 4 and 5 are below $1.0 \text{ g/m}^2/\text{year}$. The 365-day PLR for Flow-ways 1 and 3 are high (**Figure S-3**).

STA-3/4: STA-3/4 Eastern Flow-way is offline for vegetation rehabilitation/drawdown. Most online treatment cells are above target stage. Vegetation in the Eastern and Central Flow-ways is highly stressed and in the Western Flow-way is stressed. The 365-day PLRs for the Central and Western Flow-ways are below $1.0 \text{ g/m}^2/\text{year}$ (**Figure S-4**).

STA-5/6: All flow-ways in STA-5/6 are online. Most treatment cells are at or near target stage. All treatment cells have highly stressed vegetation conditions except Flow-ways 7 and 8 which are healthy. The 365-day PLRs for most flow-ways are at or below $1.0 \text{ g/m}^2/\text{year}$, except Flow-way 3 which is high (**Figure S-5 and S-6**).

For definitions on STA operational language see glossary following figures.

STA-1E Weekly Status Report – 6/5/2023 through 6/11/2023



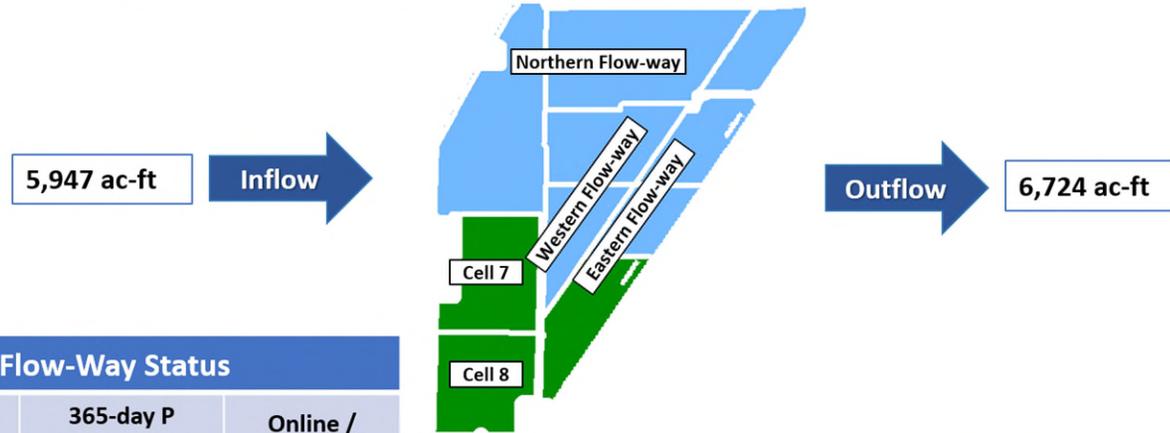
| STA-1E Flow-Way Status | | | |
|------------------------|---|--|---------------------------------|
| Flow-Way | Vegetation Status Healthy ----- Stressed | 365-day P Loading Rate (below 1.0 g P /m ² /yr is optimal) | Online / Offline / Restrictions |
| Eastern | | | Vegetation management |
| Central | Offline, refurbishments project survey starting 4/26/2023 | | |
| Western | Offline, post-construction grow in starting 3/28/2022 | | |

| As of 6/11/2023 | |
|--|---|
| Stage Based: Relative to Target Stage (TS) | |
| | Deep Water Level (> 2.8' above TS) |
| | High Water Level (1.5' – 2.8' above TS) |
| | 0.2' – 1.5' above TS |
| | Target Stage (TS +/- 0.2') |
| | 0.2' – 0.5' below TS |
| | 0.5' – 1.0' below TS |
| | Low Water Level (1.0' – 1.2' below TS) |
| | Extreme Low Water (> 1.2' below TS) |

| STA-1E Flow & Phosphorus Concentration | | | | |
|--|-------|--------|---------|--|
| | 7-day | 28-day | 365-day | |
| Total Inflow, ac-ft | 2,594 | 17,576 | 103,183 | |
| --Lake Inflow, ac-ft | 0 | N/A | 1,500 | |
| Total Outflow, ac-ft | 3,263 | 16,476 | 84,746 | |
| Inflow Conc., ppb | 60 | 67 | 105 | |
| Outflow Conc., ppb | 20 | 26 | 27 | |
| Includes Preliminary Data | | | | |

Figure S-1. STA-1E Weekly Status Report

STA-1W Weekly Status Report – 6/5/2023 through 6/11/2023



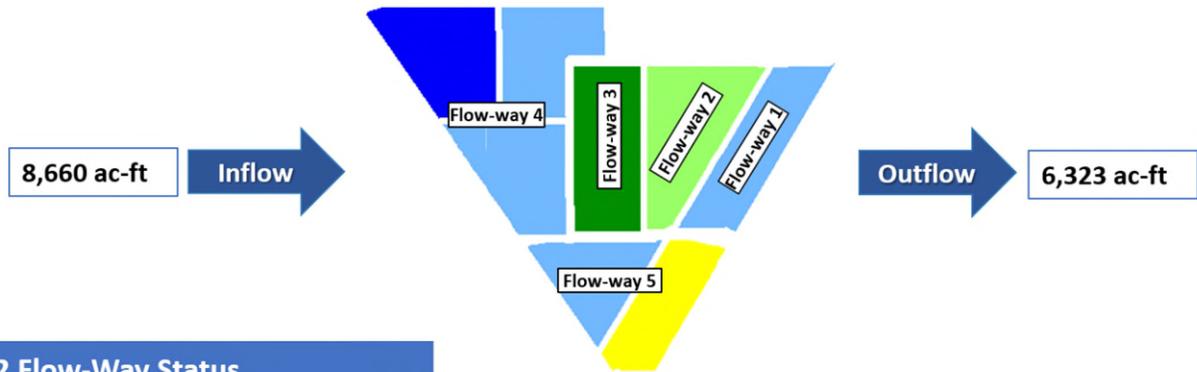
| STA-1W Flow-Way Status | | | |
|------------------------|---|---|---------------------------------------|
| Flow-Way | Vegetation Status Healthy --- Stressed | 365-day P Loading Rate (below 1.0 g P / m ² /yr is optimal) | Online / Offline / Restrictions |
| Northern | ← → | 1.0 | Vegetation management / Avian Nesting |
| Western | ← → | 1.0 | Vegetation management |
| Eastern | ← → | 1.0 | Vegetation management |
| Cell 7 | ← → | N/A | Online / Avian Nesting |
| Cell 8 | ← → | N/A | Construction / Avian Nesting |

| As of 6/11/2023 | |
|--|---|
| Stage Based: Relative to Target Stage (TS) | |
| | Deep Water Level (> 2.8' above TS) |
| | High Water Level (1.5' – 2.8' above TS) |
| | 0.2' – 1.5' above TS |
| | Target Stage (TS +/- 0.2') |
| | 0.2' – 0.5' below TS |
| | 0.5' – 1.0' below TS |
| | Low Water Level (1.0' – 1.2' below TS) |
| | Extreme Low Water (> 1.2' below TS) |

| STA-1W Flow & Phosphorus Concentration | | | |
|--|-------|--------|---------|
| | 7-day | 28-day | 365-day |
| Total Inflow, ac-ft | 5,947 | 17,733 | 156,002 |
| --Lake Inflow, ac-ft | 0 | N/A | 9,400 |
| Total Outflow, ac-ft | 6,724 | 16,571 | 168,934 |
| Inflow Conc., ppb | 181 | 147 | 190 |
| Outflow Conc., ppb | 17 | 18 | 20 |
| Includes Preliminary Data | | | |

Figure S-2. STA-1W Weekly Status Report

STA-2 Weekly Status Report – 6/5/2023 through 6/11/2023



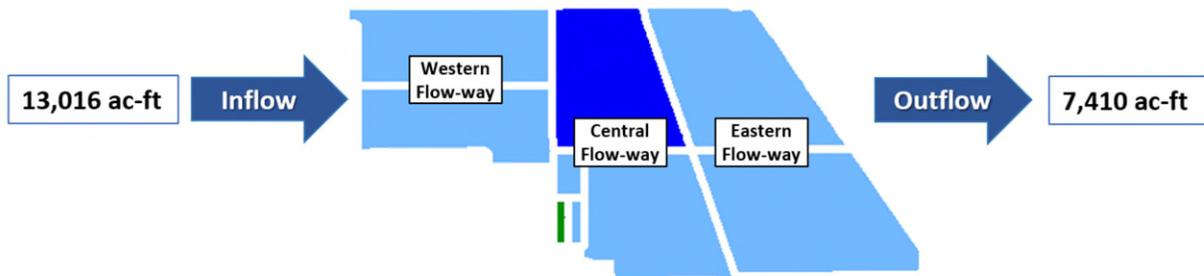
| STA-2 Flow-Way Status | | | |
|-----------------------|--|---|---------------------------------|
| Flow-Way | Vegetation Status <small>Healthy ----- Stressed</small> | 365-day P Loading Rate <small>(below 1.0 g P /m²/yr is optimal)</small> | Online / Offline / Restrictions |
| 1 | | | Online |
| 2 | Offline, post-construction grow in starting 1/23/2023 | | |
| 3 | | | Veg Rehab / Avian nesting |
| 4 | | | Vegetation Rehab |
| 5 | | | Online |

| As of 6/11/2023 | |
|--|---|
| Stage Based: Relative to Target Stage (TS) | |
| | Deep Water Level (> 2.8' above TS) |
| | High Water Level (1.5' – 2.8' above TS) |
| | 0.2' – 1.5' above TS |
| | Target Stage (TS +/- 0.2') |
| | 0.2' – 0.5' below TS |
| | 0.5' – 1.0' below TS |
| | Low Water Level (1.0' – 1.2' below TS) |
| | Extreme Low Water (> 1.2' below TS) |

| STA-2 Flow & Phosphorus Concentration | | | |
|---------------------------------------|-------|--------|---------|
| | 7-day | 28-day | 365-day |
| Total Inflow, ac-ft | 8,660 | 29,334 | 289,878 |
| --Lake Inflow, ac-ft | 0 | N/A | 21,000 |
| Total Outflow, ac-ft | 6,323 | 19,020 | 304,621 |
| Inflow Conc., ppb | 127 | 84 | 108 |
| Outflow Conc., ppb | 12 | 13 | 28 |
| Includes Preliminary Data | | | |

Figure S-3. STA-2 Weekly Status Report

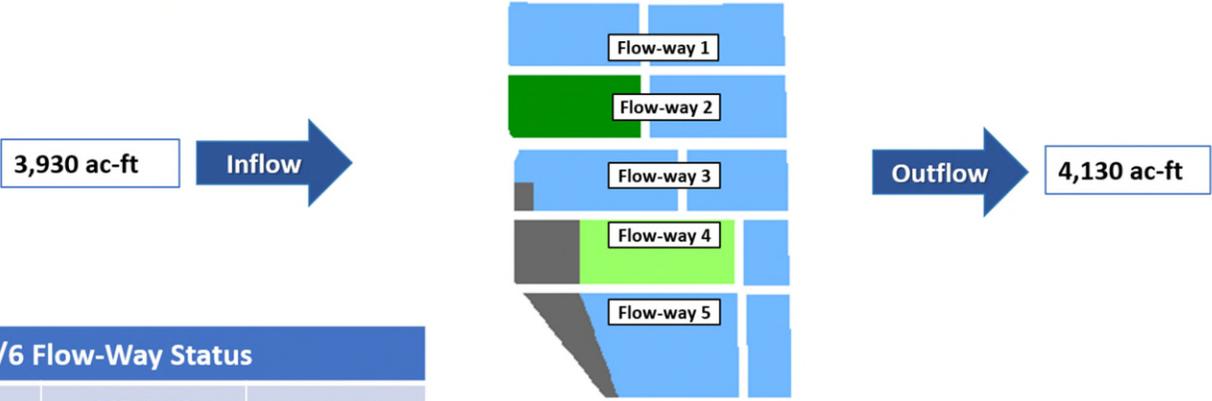
STA-3/4 Weekly Status Report – 6/5/2023 through 6/11/2023



| STA-3/4 Flow-Way Status | | | | As of 6/11/2023 | | STA-3/4 Flow & Phosphorus Concentration | | | |
|-------------------------|--|---|---------------------------------|---|---------------------------|---|--------|---------|---------|
| Flow-Way | Vegetation Status <small>Healthy ----- Stressed</small> | 365-day P Loading Rate <small>(below 1.0 g P /m²/yr is optimal)</small> | Online / Offline / Restrictions | Stage Based: Relative to Target Stage (TS) | | | 7-day | 28-day | 365-day |
| Eastern | Offline, vegetation management drawdown as of 3/1/2021 | | | <div style="display: flex; flex-direction: column; gap: 5px;"> <div style="background-color: #4a4a8a; width: 15px; height: 10px; border: 1px solid black;"></div> Deep Water Level (> 2.8' above TS) <div style="background-color: #0000ff; width: 15px; height: 10px; border: 1px solid black;"></div> High Water Level (1.5' – 2.8' above TS) <div style="background-color: #add8e6; width: 15px; height: 10px; border: 1px solid black;"></div> 0.2' – 1.5' above TS <div style="background-color: #008000; width: 15px; height: 10px; border: 1px solid black;"></div> Target Stage (TS +/- 0.2') <div style="background-color: #90ee90; width: 15px; height: 10px; border: 1px solid black;"></div> 0.2' – 0.5' below TS <div style="background-color: #ffff00; width: 15px; height: 10px; border: 1px solid black;"></div> 0.5' – 1.0' below TS <div style="background-color: #ffa500; width: 15px; height: 10px; border: 1px solid black;"></div> Low Water Level (1.0' – 1.2' below TS) <div style="background-color: #ff0000; width: 15px; height: 10px; border: 1px solid black;"></div> Extreme Low Water (> 1.2' below TS) </div> | Total Inflow, ac-ft | 13,016 | 18,152 | 303,402 | |
| Central | | | Online | | --Lake Inflow, ac-ft | 0 | N/A | 1,400 | |
| Western | | | Online | | Total Outflow, ac-ft | 7,410 | 11,827 | 302,760 | |
| | | | | | Inflow Conc., ppb | 74 | 68 | 91 | |
| | | | | | Outflow Conc., ppb | 20 | 20 | 16 | |
| | | | | | Includes Preliminary Data | | | | |

Figure S-4. STA-3/4 Weekly Status Report

STA-5/6 Weekly Status Report – 6/5/2023 through 6/11/2023



STA-5/6 Flow-Way Status

| Flow-Way | Vegetation Status Healthy ----- Stressed | 365-day P Loading Rate (below 1.0 g P /m ² /yr is optimal) | Online / Offline / Restrictions |
|----------|---|--|---------------------------------|
| 1 | ← → | | Online |
| 2 | ← → | | Online |
| 3 | ← → | | Online |
| 4 | ← → | | Online |
| 5 | ← → | | Online |

As of 6/11/2023

Stage Based: Relative to Target Stage (TS)

- Deep Water Level (> 2.8' above TS)
- High Water Level (1.5' – 2.8' above TS)
- 0.2' – 1.5' above TS
- Target Stage (TS +/- 0.2')
- 0.2' – 0.5' below TS
- 0.5' – 1.0' below TS
- Low Water Level (1.0' – 1.2' below TS)
- Extreme Low Water (> 1.2' below TS)

STA-5/6 Flow & Phosphorus Concentration

| | 7-day | 28-day | 365-day |
|---------------------------|-------|--------|---------|
| Total Inflow, ac-ft | 3,930 | 9,047 | 160,856 |
| --Lake Inflow, ac-ft | 0 | N/A | 0 |
| Total Outflow, ac-ft | 4,130 | 5,580 | 153,704 |
| Inflow Conc., ppb | 237 | 238 | 286 |
| Outflow Conc., ppb | 38 | 34 | 40 |
| Includes Preliminary Data | | | |

Figure S-5. STA-5/6 Weekly Status Report (Flow-ways 1 – 5)

STA-5/6 Weekly Status Report – 6/5/2023 through 6/11/2023



| STA-5/6 Flow-Way Status | | | | As of 6/11/2023 | |
|-------------------------|--|--|---------------------------------|--|---|
| Flow-Way | Vegetation Status Healthy ----- Stressed ←-----→ | 365-day P Loading Rate (below 1.0 g P /m ² /yr is optimal) | Online / Offline / Restrictions | Stage Based: Relative to Target Stage (TS) | |
| | | | | Legend | Legend |
| 6 | ←-----→ | 1.0 | Online | Deep Water Level (> 2.8' above TS) | High Water Level (1.5' – 2.8' above TS) |
| 7 | ←-----→ | 1.0 | Online | 0.2' – 1.5' above TS | Target Stage (TS +/- 0.2') |
| 8 | ←-----→ | 1.0 | Online | 0.2' – 0.5' below TS | 0.5' – 1.0' below TS |
| | | | | Low Water Level (1.0' – 1.2' below TS) | Extreme Low Water (> 1.2' below TS) |

Figure S-6. STA-5/6 Weekly Status Report (Flow-ways 6 – 8)

Basic Concepts and Definitions for STA Weekly Status Report

- **Inflow:** Sum of flow volume at all inflow structures to an STA.
- **Lake Inflow:** Portion of the STA total inflow volume that originates from Lake Okeechobee.
- **Outflow:** Sum of flow volume at outflow structures from an STA.
- **Total Phosphorus (TP):** Total mass of phosphorus in all its forms; including particulate, dissolved, etc.
- **Inflow Concentration:** TP concentration is the mass of TP in micrograms per liter of water, $\mu\text{g/L}$ or ppb. Inflow concentration refers to the flow-weighted mean TP from all inflow structures over a period of time.
- **Outflow Concentration:** The flow-weighted mean TP from all outflow structures over a period of time. The outflow concentration represents the reduction of inflow TP achieved by STA treatment of the inflow water.
- **WQBEL:** The STA outflow concentration that is required upon completion of the Restoration Strategies projects by December 2025. The outflow concentration shall not exceed 13 ppb as an annual flow weighted mean in more than 3 out of 5 water years on a rolling basis and shall not exceed 19 ppb as an annual flow weighted in any water year.
- **Flow-Way (FW):** One or more treatment cells connected in series. Cells typically have emergent aquatic vegetation (EAV) in the front portion of the flow-way followed by a mix of EAV and submerged aquatic vegetation (SAV)
- **Vegetation Status:** Healthy means the vegetation condition is good and will allow the STA to perform as designed. Stressed means the vegetation is showing signs of poor health, such as browning or areas of vegetation die-off, or the cell contains undesirable vegetation such as floating exotic vegetation requiring treatment. The TP reduction capability of the STA is affected when the vegetation condition is poor.
- **Phosphorus Loading Rate (PLR):** Mass of inflow TP in grams, divided by total treatment area of STA in square meters, per year. In general, a 365-day value of less than 1.0 is needed for an STA to perform optimally. A PLR of 2.0 is considered very high and a PLR of 3.0 is considered extremely high. The TP reduction capability of the STA is affected when the PLR is high, very high and extremely high.
- **Online:** Online status means the FW can receive and treat inflow.
- **Online with Restriction:** The FW can receive and treat inflow, but the amount of flow or water level may be limited temporarily. For example, a vegetation rehabilitation effort may require reduced flows through an area while the new plants are establishing, or nesting by protected species may require a certain water level not to be exceeded.
- **Offline:** The FW is unable to receive and treat inflow due to repairs, construction, or other prohibitive reasons.
- **Depth:** Difference between the average surface water level in a cell and the average ground elevation in that cell. Target depths, or depths between flow events, are between 1.25 ft to 1.5 ft. As depth approaches or drops below zero, an increasing percentage of the cell is considered dry and STA conditions deteriorate. An increase in depth above target depth is expected with increasing flow. However, as depth increases much above the target depth and is sustained over a period of time, it can be detrimental to vegetation health and overall STA treatment performance.
- **Note:** The data provided in this summary report were developed using a combination of provisional and quality-assured flow and water quality data. In some cases, best professional judgment was used to estimate missing data and revise questionable data. Values provided are not considered final but are appropriate for use in STA operational decision-making.

Everglades

Water Conservation Area Regulation Schedules

There was average or significant rainfall across much of the Everglades region in the previous week, with only WCA-3A receiving less than 1 inch. WCA-1: Last week stage at the 1-8C fell quickly towards schedule. The average on Sunday was 0.17 feet above the flat Zone A1 regulation line. WCA-2A: Stage rose quickly at the S11B–HW gauge last week, with Sunday’s average 0.79 feet above the flat regulation line. WCA-3A: The change in stage at the Three Gauge Average was minimal. The average stage was 0.29 feet below the rising regulation line on Sunday. WCA-3A North: At gauge 62 (Northwest corner) stage was also steady, the average on Sunday was 0.11 feet below the rising Upper schedule line (**Figures EV-1 through EV-4**).

Water Depths

The SFWDAT suggests current stage has risen to near ground surface across most of the BCNP and in northwestern WCA-3A. Central WCA-3A depths are rising with less potential for stage below ground. Pondered conditions are building in eastern WCA-2A and in the upper reaches of the L-67s in WCA-3A. Hydrologic connectivity remains pronounced within the eastern sloughs of ENP. Comparing current WDAT water depths to one month ago, conditions within the WCAs are similar but significantly wetter in central BCNP and parts of ENP. Looking back a year ago, conditions are also similar in the WCAs but significantly drier in far western BCNP (**Figure EV-5 and Figure EV-6**). Comparing current conditions to the 20-year average on June 11th: Depths are average to just above in WCAs -1 and -2A, also northern WCA-3A and southern WCA-3B. Conditions remain well above average in central ENP, closer to average to the west. (**Figure EV-7**).

Taylor Slough and Florida Bay

Total weekly rainfall averaged 1.6 inches in Taylor Slough and Florida Bay over the past week (Monday-Sunday) based on the 18 gauges used for this report. Total weekly rainfall ranged from 0.6 inches at Garfield Bight (GB) in the western nearshore region to 3.3 inches at Trout Creek (TC) in the eastern nearshore region. Most stages across Taylor Slough increased, averaging an increase of +0.15 feet. Changes ranged from –0.08 feet at EVER6 in the eastern slough to +0.33 feet at E112 in the northern slough (**Figure EV-8 and Figure EV-9**). Taylor Slough water levels are above the historical average for this time of year by +10.0 inches compared to before the Florida Bay initiative (starting in 2017), a decrease of –0.5 inches from last week.

Average Florida Bay salinity was 32.5, –1.9 lower than the previous week. Salinity continued to decline at most sites and changes ranged from a decrease of –4.5 in Joe Bay (JB) in the eastern nearshore region to an increase of +1.0 in Buoy Key (BK), the western region (**Figure EV-8**). Salinities remain within the IQR for the Eastern, Central and Western regions of the bay (**Figure EV-10**). Florida Bay salinity is –1.2 below its historical average for this time of year, down –0.7 from last week.

Water Management Recommendations

Balancing basin inflows and outflows, allowing for a natural rate of stage change has ecological benefit as the wet season progresses. Operations that elevate the ascension

rates above 0.18 feet per week would have detrimental ecological impacts in sensitive regions of the EPA. The ecology of WCA-2A would benefit from a moderate ascension rate or even a slow recession in the marsh. Ideal rates would be a recession of around 0.25' per two weeks until stages reach 0.5' above schedule. If necessary, an increase in discharge from the S-11 structures to induce recessions would not have detrimental impacts downstream. As conditions remain at the 90th percentile in NESRS, when water is available flow through Taylor Slough has ecological benefit downstream. Individual regional recommendations can be found in **Table EV-2**.

Table EV-2. Previous week’s rainfall and water depth changes in Everglades basins.

| Everglades Region | Rainfall (inches) | Stage change (feet) |
|-------------------|-------------------|---------------------|
| WCA-1 | 1.84 | +0.01 |
| WCA-2A | 2.11 | +0.29 |
| WCA-2B | 2.47 | +0.04 |
| WCA-3A | 0.98 | -0.02 |
| WCA-3B | 1.83 | +0.01 |
| ENP | 2.01 | -0.02 |

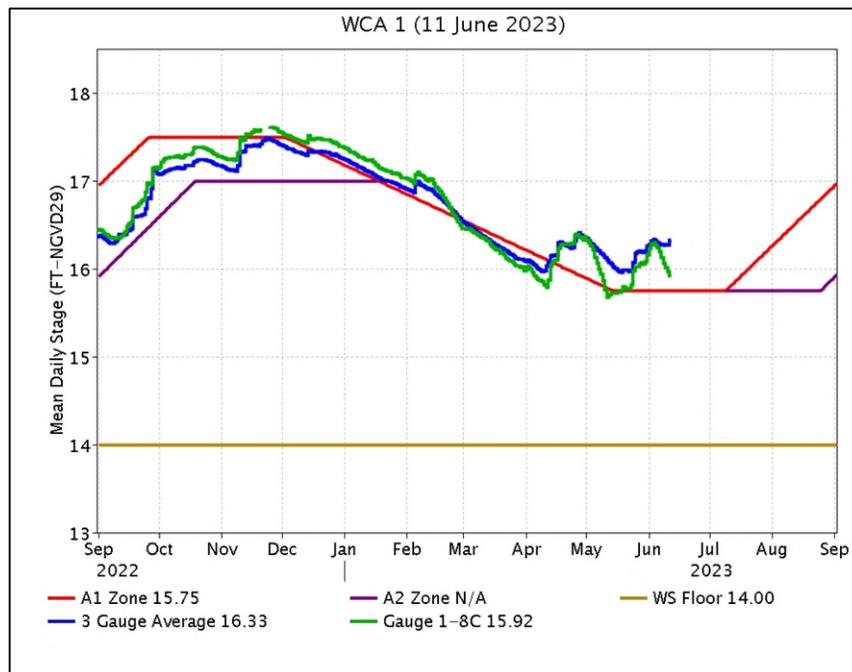


Figure EV-1. WCA-1 stage hydrographs and regulation schedule.

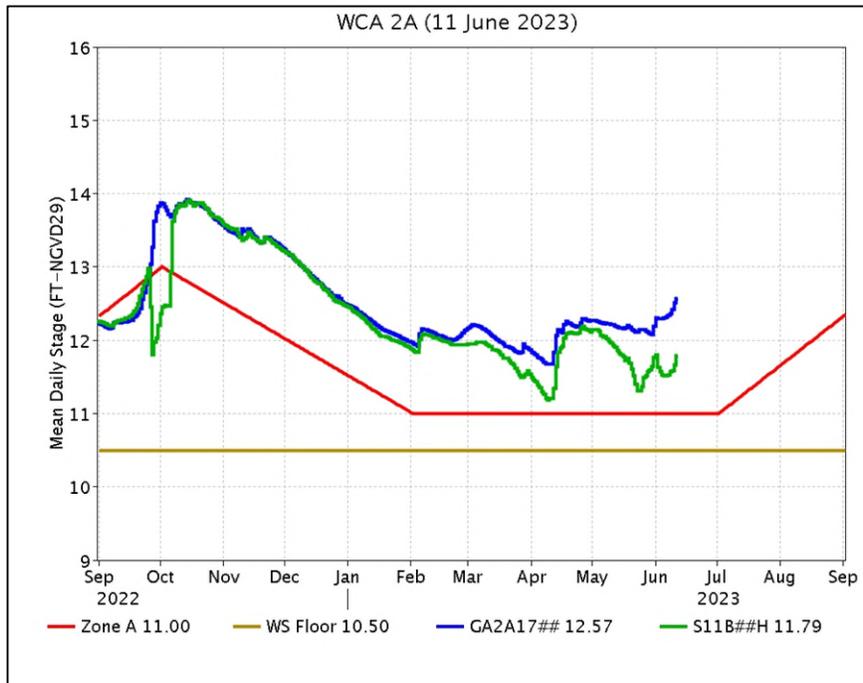


Figure EV-2. WCA-2A stage hydrographs and regulation schedule.

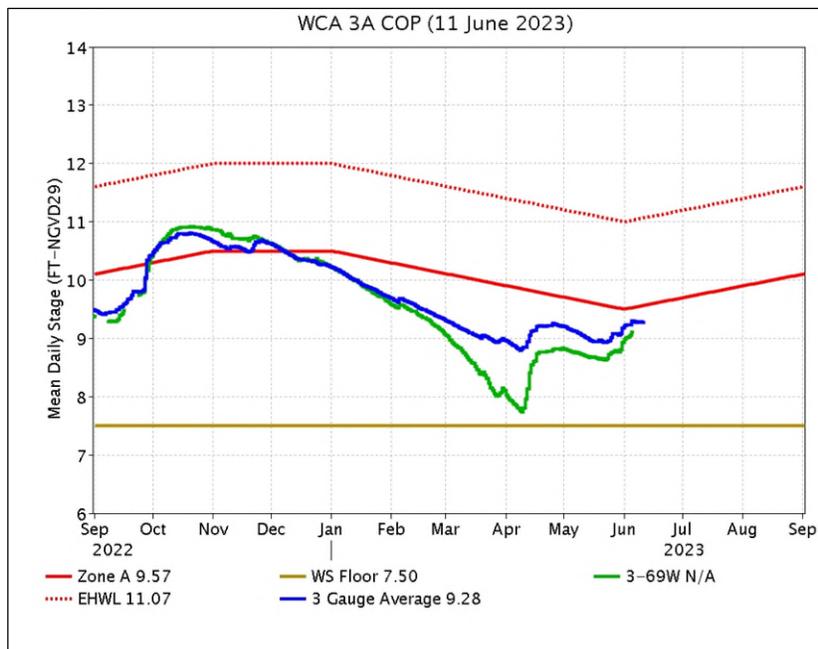


Figure EV-3. WCA-3A stage hydrographs (three-gauge average, 3-69W) and regulation schedule.

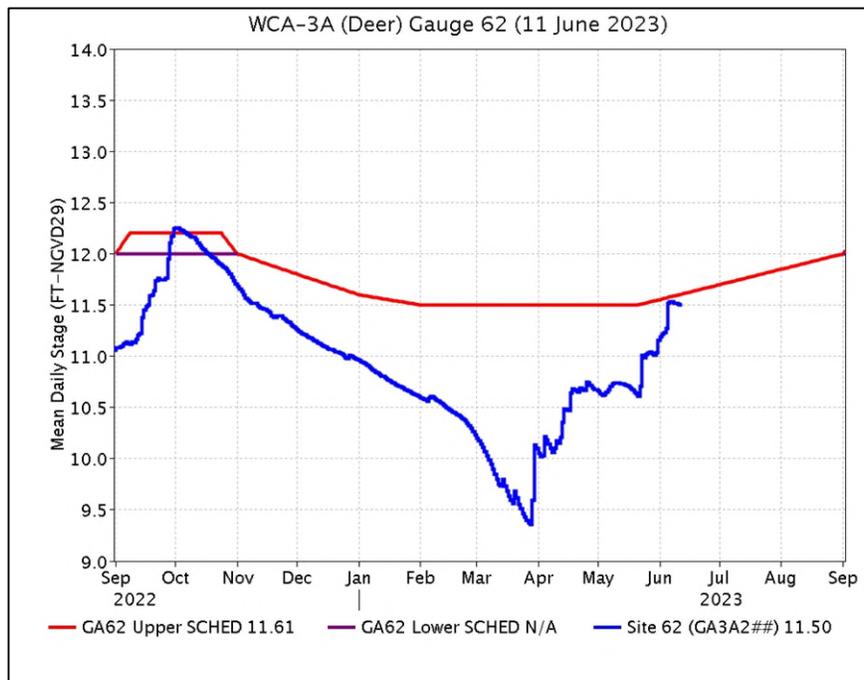


Figure EV-4. WCA-3A stage hydrograph (Deer gauge; Site 62) and CA62 regulation schedule.

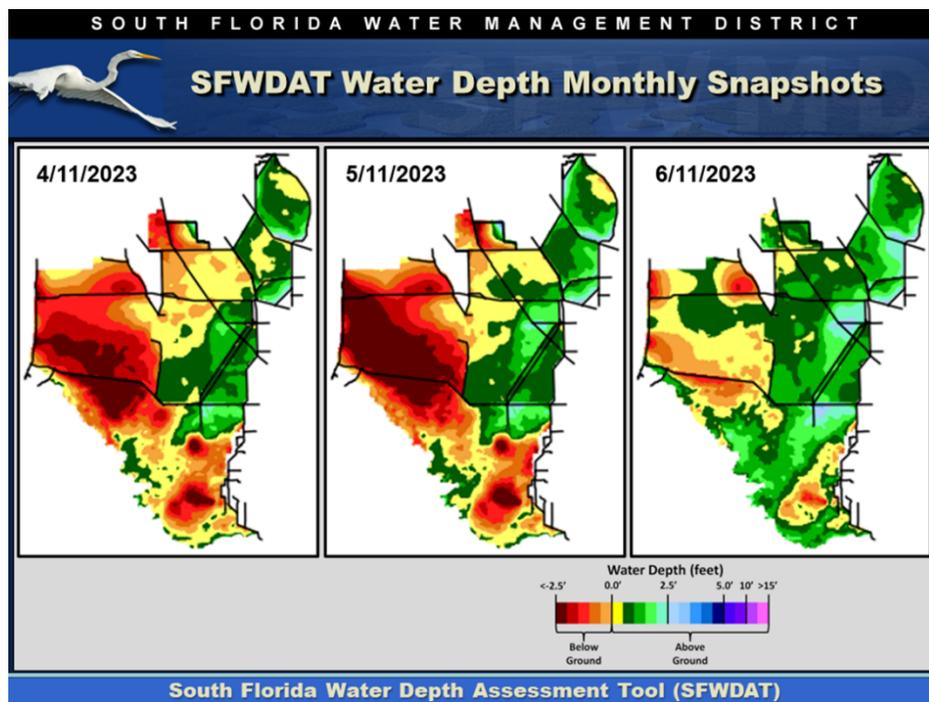


Figure EV-5. Everglades water depths from two months ago (left), one month ago (center) and present (right), based on SFWDAT.

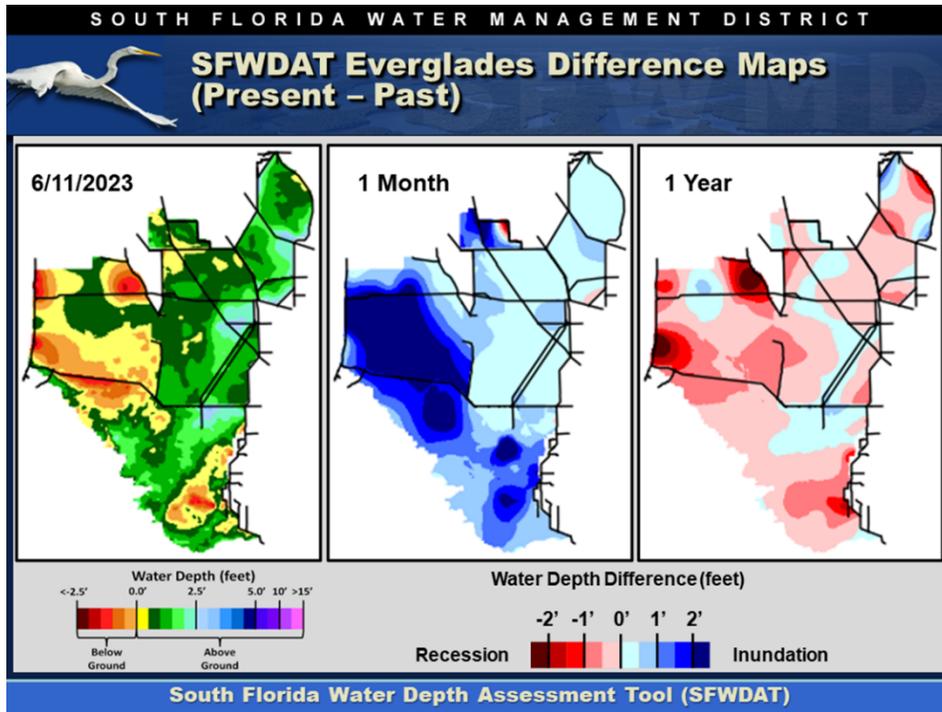


Figure EV-6. Present Everglades water depths (left) and water depth changes from one month (center) and one year (right) ago, based on SFWDAT.

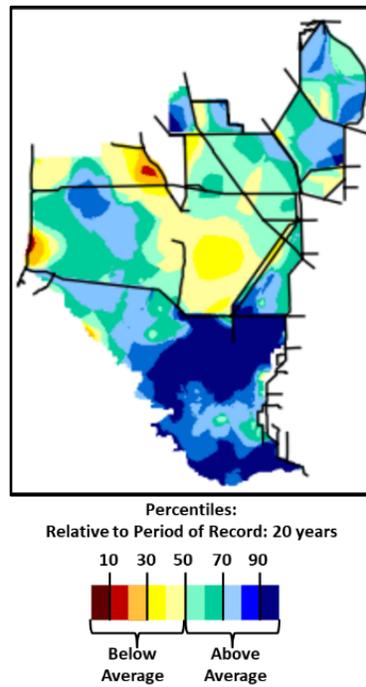


Figure EV-7. Present water depths (6/11/2023) compared to the day of year average over the previous 20 years.

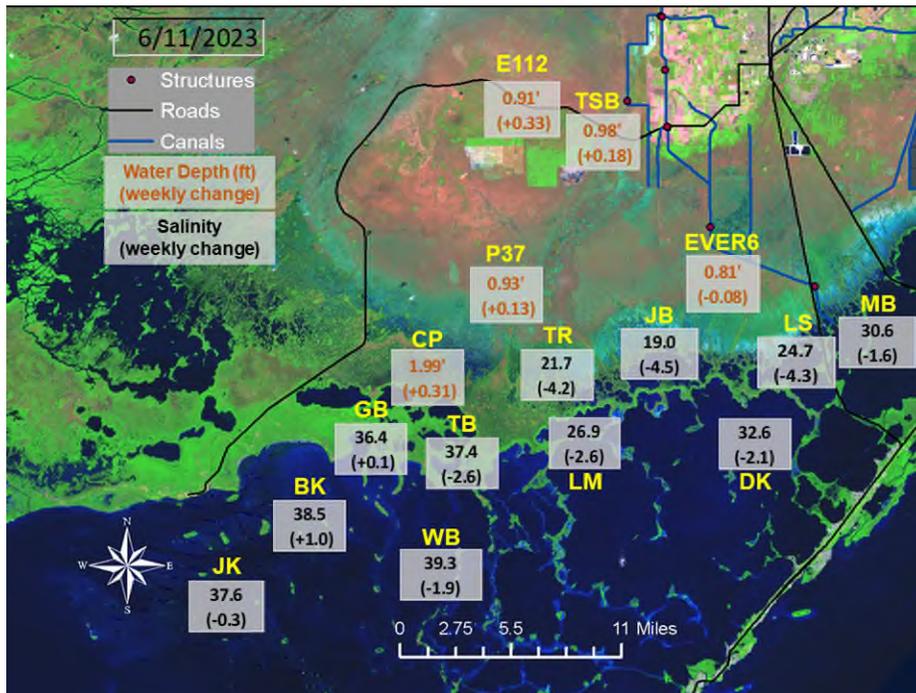


Figure EV-8. Taylor Slough water depths with changes since a week ago and Florida Bay salinities with changes since a week ago.

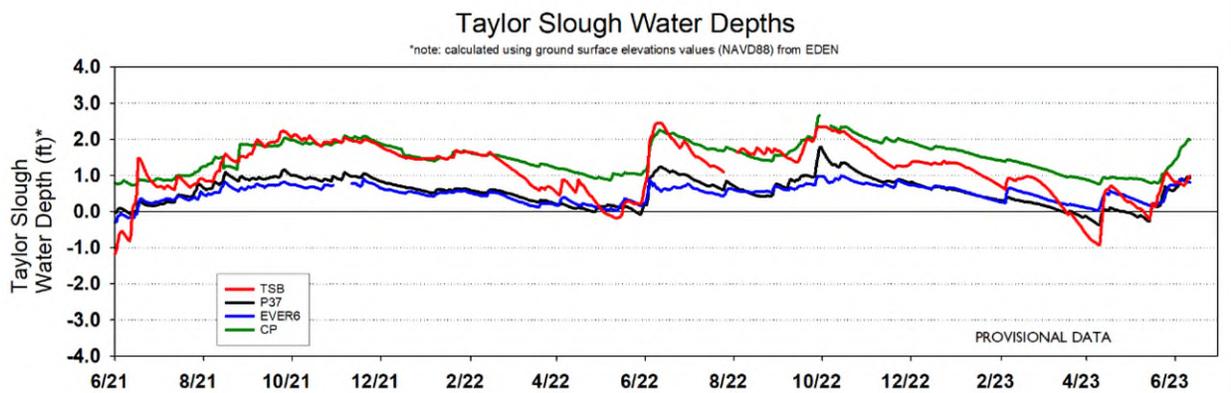


Figure EV-9. Taylor Slough water depth time series.

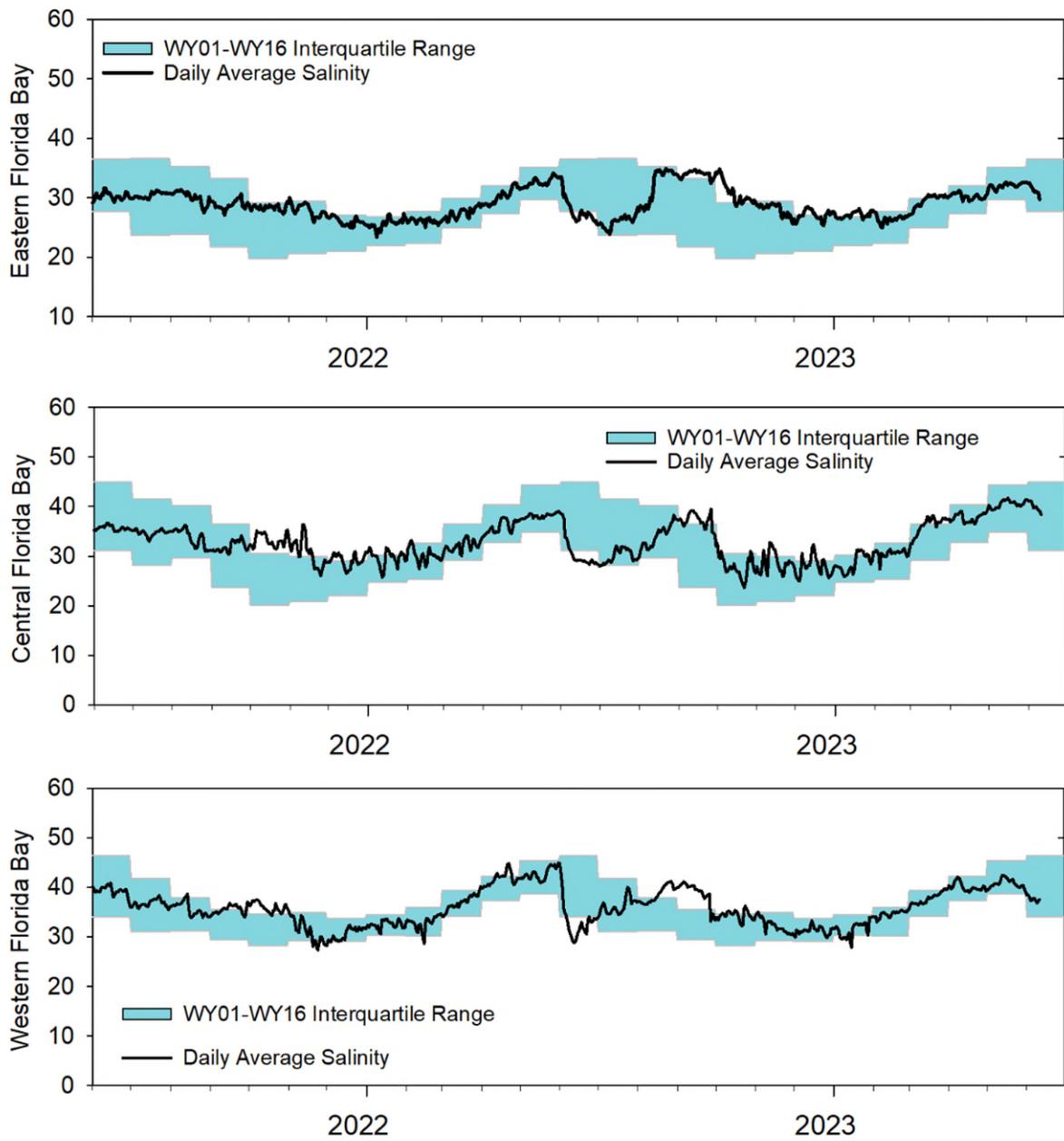


Figure EV-10. Eastern (top panel), Central (middle panel) and Western (bottom panel) Florida Bay daily average salinities with interquartile (25-75 percentile) ranges.

Table EV-2. Weekly water depth changes and water management recommendations

| SFWMD Everglades Ecological Recommendations, June 13, 2023 (red is new) | | | |
|--|--|--|---|
| | Weekly change | Recommendation | Reasons |
| WCA-1 | Stage increased by 0.01' | Recession rate of less than 0.10' per week until stage reaches 0.25' above the regulation schedule. | Protect within basin and downstream habitat and wildlife. Assist in creating conditions acceptable for Rx burn. |
| WCA-2A | Stage increased by 0.29' | Allow water to flow south from this basin until stages reach 0.5' above regulation schedule at the 2-17 gauge. Recession rate of less than 0.125' per week, or 0.25' per week. | Protect within basin and downstream habitat and wildlife. |
| WCA-2B | Stage increased by 0.04' | Conserve water in this basin as possible Ascension rate of less than +0.18' per week. | Protect within basin and downstream habitat and wildlife. |
| WCA-3A NE | Stage increased by 0.10' | Conserve water in this basin as possible. Ascension rate of less than +0.18' per week. | Protect within basin and downstream habitat and wildlife. |
| WCA-3A NW | Stage was unchanged | Conserve water in this basin as possible. Ascension rate of less than +0.18' per week. | |
| Central WCA-3A S | Stage decreased by 0.09' | Ascension rate of less than +0.18' per week. | Protect within basin and downstream habitat and wildlife. |
| Southern WCA-3A S | Stage decreased by 0.08' | | |
| WCA-3B | Stage increased by 0.01' | Ascension rate of less than +0.18' per week. | Protect within basin and downstream habitat and wildlife. |
| ENP-SRS | Stage decreased by 0.02' | Make discharges to ENP according to COP and TTF protocol while adaptively considering upstream and downstream ecological conditions. | Protect within basin and upstream habitat and wildlife. |
| Taylor Slough | Stage changes ranged from -0.08' to +0.33' | Move water southward as possible. | When available, provide freshwater buffer for downstream conditions. |
| FB- Salinity | Salinity changes ranged from -4.5 to +1.0 | Move water southward as possible. | When available, provide freshwater to maintain low salinity buffer and promote water movement. |

Biscayne Bay

As shown in **Figure BB-1**, mean total inflow to Biscayne Bay was 1,241 cfs, and the previous 30-day mean inflow was 951 cfs. The seven-day mean salinity was 26.1 at BBCW8 and 25.1 at BBCW10, both within the ideal salinity range for estuarine organisms in this region (salinity less than 35). Data were provided by Biscayne National Park.

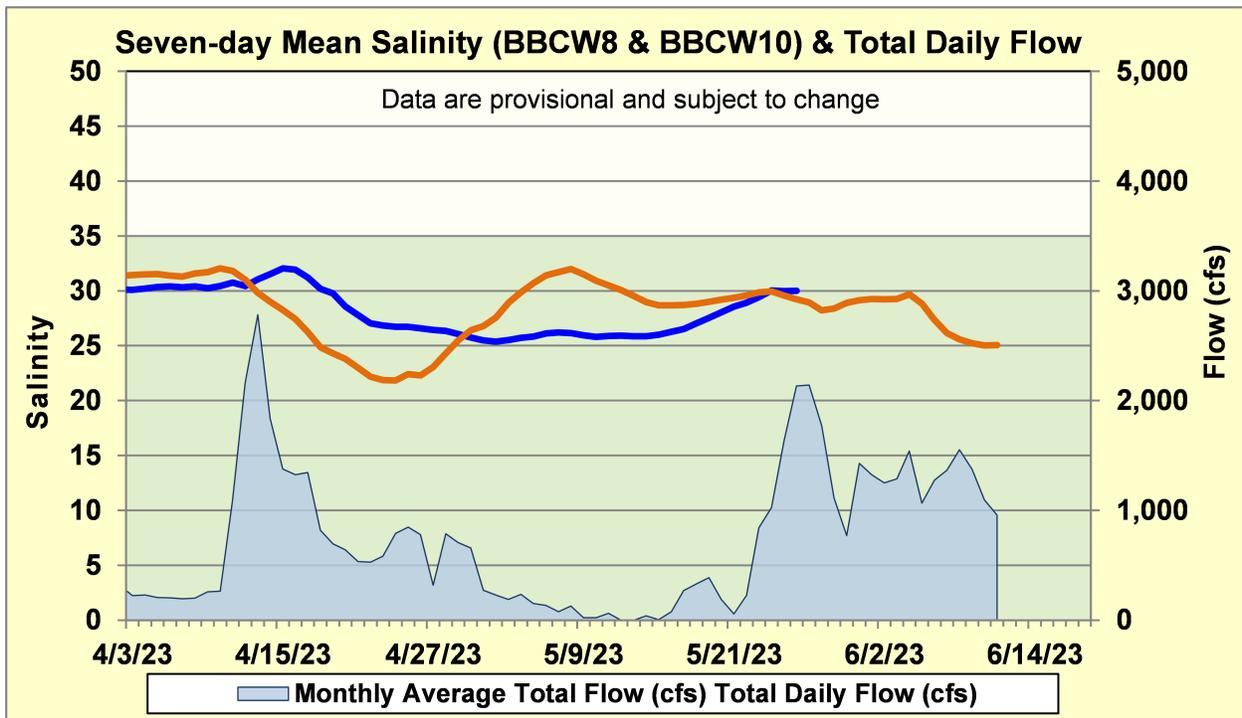


Figure BB-1. Seven-day mean salinity at BBCW8 and BBCW10 and total daily flow in Biscayne Bay. Total daily flow was calculated using flow from structures S20G, S20F, S21, S21A, S123, and S700P.